

CONTEMPORARY PHILOSOPHY OF ABYA YALA



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Five centuries ago the conquistadores burned the books written by the thinkers of Mexico and Guatemala.

Voluntary burning of Mayan books in the 16th century .

This Sunday, July 12, 1562, in the large square of San Miguel de Mani in Yucatán, the smoke and ashes of the Inquisition carried away 5,000 precious codices, parchments delicately illuminated with vegetable colors, painted with a hedgehog brush, statues of finely engraved wood, manuscripts in buckskin and wild fig tree bark."

Standing facing the flames, the inquisitor confronts the devil. The fire rumbles, blackens, devours, and around the furnace rises a long complaint, that of the Indians hung by the feet, beaten with rods, shorn and sprinkled with boiling pitch. A little further on, other natives wait, heads bent, heretics wearing the san-benito, the yellow cassock with which those destined to the stake of the Inquisition are dressed.

Today, these classics are reborn from their ashes like so many phoenixes. Coincidentally, this philosophical conjunction takes place

exactly five hundred years after Moctezuma II (1466-1520), the spokesman (tlatoani) of the Aztec Triple Alliance , met the conquistador Hernán Cortés on the threshold of his capital in November 1519 Then begins the destruction of non-Christian manuscripts in the libraries of the Nahua and Maya peoples by zealots from Europe



These handwritten texts explain, teach a largely forgotten philosophy, that of the original inhabitants of Mesoamerica: the Nahua, speakers of Nahuatl (also known as Mexica or Aztecs, from the highlands of Mexico) and the Maya (who live in Guatemala, Belize, Honduras , and south of Mexico).

Already, in the 1530s, the Spanish brother Bernardino de Sahagún learned that the Nahua , or Aztec societies, had their own scholars, the tlamatinime - this gender-neutral substantive translates as "knower of things", "wise", "philosopher".

These philosophers devoted themselves to writing,

preserving the Nahua literary classics, and educated children of both sexes, from the age of eight, in existential questions. Many of them were women, and they benefited from years of teaching in calmecacs - Nahua institutions of higher education. The philosophers took care of, copied the contents of the books, the memory bank of their society. The Nahuas considered these tlamatinime , which also

included poets and historians, to exercise intellectual and moral leadership.

When Sahagún realized - with the help of native collaborators such as Antonio Valeriano - the depth of thought of his Nahua informants, he praised these elders, elevating them to the rank of "wise men or philosophers" (*sabios* o *philosophos*). Thus, a century before Descartes, anticipating the emergence of modern European philosophy, we now know that, just as among the "Greeks, Romans", it was "customary in this Indian nation" to hold "the wise, eloquent, virtuous, and courageous "in "high esteem."

Nahua philosophy

The Nahua argument for a "dignified life", or more exactly "rooted life" , *neltiliztli* , "operates in ethical terms in the manner of Aristotle's *eudaimonia* ". This Greek perspective is comparable to the Nahua concept of virtues (that which is "good, noble": *qualli* , *yectli*): thus Nahua wisdom "carries a gaze which in ethical terms is similar to that of Aristotle".

From the 1540s, for four decades, Sahagún transcribed the content of his interviews with the elders of the Nahuas. They wrote first in Nahuatl , then in the Roman alphabet, before translating into Spanish. The result was a 1,200-page bilingual encyclopedia, containing over 2,400 illustrations drawn by Nahua artists, titled *The General History of Things in New Spain* - known today as the *Florentine Codex*. These 16th centu-

ry books, whose translation into English, completed in 1982, required thirty years of work, cover all of Nahua knowledge, from history to the natural sciences, from economics to astronomy, including the philosophy.

The rediscovery of Mesoamerican manuscripts

Luckily, there are other Mesoamerican manuscripts that did not disappear during the looting and burnings of the Spanish colonists. Thousands of pages were copied and preserved. Today, they come back to life, through efforts at deciphering, translations, new studies. The most famous Mayan text is the *Popol Vuh* ("Book of the Council", or "Book of the Community"), laid down in writing in the middle of the 16th century in the north of present-day Guatemala

City. This work describes the origins and history of the Maya people of the K'iche' , who today number more than 1.5 million people in Guatemala. And he gives voice to women; the word "grandmother" is mentioned twice as often as that of "grandfather". With the deciphering of Maya glyphs over the past decades, new avenues are now open to philosophers. Of the paths taken by McLeod , when he stipulates in the introduction to his latest book on Maya philosophy: "Today, for a philosopher who, like me, did not study archaeology, it is now possible and constructive to explore the thoughts of the ancient Maya in a way that was unthinkable only twenty years ago. The unearthed, deciphered, understood and accumulated knowledge of Maya writing and culture makes possible the exercise of Maya philosophy as a philosophical tradition. "culture



Such acceptance is an unprecedented situation for classical Mesoamerican philosophy. In 1956, when M. León- Portilla published his doctoral thesis on Nahua philosophy, *La filosofía Nahuatl estudiada en sus fuentes* ("Nahua philosophy studied in its sources"), the term " filosofía ", philosophy, gave rise to controversy: could one really speak of philosophy when one evoked the indigenous peoples of the Americas, when the only name of America evokes the European imperialism which thus named these continents? These lands were called Cemanahuac - "Surrounded by water" - in Nahua, and Abya Yala - "Generous Land" - in Kuna , the language spoken in present-day Panama.

The University of Oklahoma Press (The University of Oklahoma Press) resolved the dilemma by replacing, in the English translation of Mr. León-Portilla 's thesis , the term " filosofía " with the expression " thought and culture " - "thought and culture". This is how the English edition received the title of *Aztec Thought and Culture: A Study of the Ancient Nahuatl Mind* (1963).

But whatever the title placed on the cover, in English as in Spanish, the content remained explosive: because Mr. León-

Portilla intended to demonstrate in this study that the philosophers who spoke Nahua (tlamatinime) had attacked each other, in a purely rational, to reflections on the consciousness of being oneself! Reflections that were readily said to be specific to classical Greek thought, developed at the time of the Sophists and Socrates, even if it means conceding that certain Eastern thinkers had been able to outline similar reflections.

In arguing this, M. León- Portilla was echoing Sahagún , who wrote the following line four centuries before him, from confidences of his native informants in the first half of the 16th century, about the role of a philosopher among the Nahua "He acts like a mirror in front of others; he makes them cautious, attentive." What Mr. León- Portilla renders in the following terms: "Again, has similarity with the ethical thought of Greece and India: man needs to know himself, to access the " gnóthi seauton " by Socrates. "

Nahua thought through the prism of the challenges of the 21st century as we enter, in these 2020s, a world that could experience both political and climatic extremes, it might be a good idea for us too to put a mirror in front of us. To pass to the other side, why not in a renaissance, if not a revolution of Mesoamerican philosophy ?



We who are slowly getting used to living in an era of fake news broadcast on a digital network with global ramifications, who are about to experience the multiplication of extreme weather events, who could hand over control of our lives to artificial intelligence, who are watching democracies teetering on the edge of the precipice...

In such an era, it is time to ask some fundamental and existential questions. We could, for example, take up again fresh the enigma formulated by one of the great pre-Columbian philosophers of the 15th century.

EXERGUE: "I, Nezahualcoyotl, I ask: Is it true that we really live on earth?"

Nezahualcoyotl was a Nahuatl philosopher-king. A patron of the arts, he contributed to the beautification of the city-state of Texcoco, an intellectual center located slightly to the east of the city known today as Mexico City, on the edge of the now-dried Lake Texcoco.

Nezahualcoyotl ordered in his time the construction of aqueducts which brought running water into the city. And he had halls built in the palaces, so that philosophers, artists and poets could meet there.

But in matters of philosophy proper, Nezahualcoyotl never gave clear answers to his questions, and he spoke in riddles. He thus preferred to take as an object of reflection our general lack of knowledge, our condition of "mortals that we are, humans, always and again".

Nezahualcoyotl worries: "I am intoxicated, I sob, I think, I speak, and in myself I discover it." He asks his readers and listeners existential questions: "What is your mind looking for? heart? [...] Can anything be hoped for on earth?"

At the dawn of a new decade, such fundamental questions seem more relevant than ever if we really intend to establish a "2020 global vision". The United Nations Climate Action Summit, or activists such as the young Greta Thunberg, are putting pressure on politicians, decidedly too stuck in the short term to deal with a climate crisis. Collective calls for coordinated action at scale planetary multiply.

It is possible that a broader awareness will emerge, simply because we will measure ourselves against global challenges. And in this case, among the philosophical inspirations that will allow us to face these existential threats, we can find hope in the classical philosophical traditions of pre-Columbian America. Simply because, 550 years later, the question posed by Nezahualcoyotl remains topical: What is reality? What is true? And how do we keep our balance on our "earth that slips away under our feet" (tlaticpac)?

Such was the nature of the questions posed by Nahua philosophers in what is now central Mexico. Their role was to "hold up a mirror to others". The philosopher was to lead people through this analogy to be "cautious", to see "a face (a person) appear in them". Because we are



Nezahualcoyotl (April 28, 1402 - June 4, 1472) was a scholar, philosopher (tlamatini), warrior, architect, poet, and ruler (tlatoni) of the city-state of Texcoco of the Mexican Triple Alliance.

only passing through on this earth: "We only came here to get to know each other" The skepticism of the greatest Mesoamerican thinkers echoes the rational reflections of a Socrates.

The writings of the indigenous peoples of the 16th century tell us that among the Nahua , women were considered important philosophers. A chronicler reports that the "Lady of Tula" had philosophical discussions with Nezahualpilli (1664-1515), the elected leader of Texcoco , educated

under the best auspices since son of Nezahualcoyotl - already mentioned. This "Lady of Tula" was described thus: "She was so wise that she could argue with the ruler and the wisest of her kingdom, and she was also an outstanding poetess." Another well-known intellectual was named Macuilxochitl . Born around 1435, she is the author of a compelling poem about how women saved an enemy ruler in 1476.

Her poem begins with these words: "I raise my songs, I, Macuilxochitl , to gladden the Life-

giver, let the dance begin!" As Christian Europe punished the sinful nature of women-witches at the stake of the Inquisition, indigenous Mexicans celebrated female fertility as a direct link to nature and the land..."

If we refer to The General History..., the encyclopaedic work compiled by Sahagún in the 16th century, and more specifically to his Book VI, devoted to "Rhetoric and moral philosophy", we discover

there a crucial passage, which concentrates in a few words Nahua metaphysics. This is when a philosopher (tlamatini) gives her daughter the following advice, referring to "noble women, old women, those with white hair, [they who] raised us as we are ": "We move, and we live, around the top of a mountain. Over there is a chasm; and over here is a chasm. If you go there, or if you go here, you will fall. it is only in the middle [tlane pantla] that you have to go, that you have to live."

This "philosophy of balance" which allows us to live on this "slippery earth" is a vital



part of the Nahua philosophy. This thought could well be applicable to our time: who among us today does not have the feeling of walking on the crest of a cliff? Who thinks they are safe from soon feeling themselves slipping on an increasingly rocky slope, increasingly steep, until they fall into an abyss?

Nahua thinkers defended the need to seek a measured stride, a middle way associating being and living, as James Maffie points out in *Aztec Philosophy : Understanding a World in Motion* (2014) - A book devoted solely to Nahua metaphysics; his next book, *Toltecayotl : An Aztec Understanding of the Well-Ordered Life*, will focus on Nahua ethics and its concept of well-being.

Teotl is a key concept of Nahua thought: it is a power, an autonomous, dynamic energy, which engenders itself, which "vivifies the cosmos and what it contains", to quote J. Maffie . Teotl is, in metaphysical terms, both immanent and transcendent.

According to the pantheistic Nahua view, which does not prioritize the world between celestial and terrestrial, life is essentially a movement of permanent maintenance of balance - knowing that the abyss is always a stride away. If we were to follow the advice of Nahua thinkers, we should act more carefully, constantly weighing the consequences of our words and actions on society. Truth (*neltiliztli*) is something we must seek by being genuinely rooted in ourselves. This is how, believes J. Maffie , truth becomes not a semantic question but a way of being and doing, a way of life. The Nahua concept of truth can be apprehended in ontological terms, as an *aletheia* firmly established in being. The full meaning of the Nahua concept of *neltiliztli* "includes an inalienable Heideggerian component , namely non-referential *alètheia* , unveiling", argued Willard Gingrich.

An even more cosmological vision comes to us from the highlands of Guatemala. Where the advanced Maya civilization developed, with the city of Tikal (*Yax Mutal*) as the epicenter, in the Classic

period (250-900 CE). The Maya not only created some of the most impressive architecture and art in the world. They developed a base 20 numeration, which used positional zero as early as 36 BCE - the oldest documented use of zero - and a logosyllabic writing system some 1800 years before the arrival of Europeans. The deciphering of the different combinations of the 800 signs - graphemes which combine, as the term logographic indicates,

1) being symbols corresponding to words (lemmas)
2) that can be read phonetically as syllables - is still ongoing. In 2018, chemical tests proved that the Mexico City Mayan Codex (formerly known as the " Grolier Codex "), 800 signos - grafemas que combinan, como indica el término logográfico,

1) siendo símbolos correspondientes a palabras (lemas)

2) que se puede leer fonéticamente como sílabas, todavía está en curso. En 2018, las pruebas químicas demostraron que el Códice Maya de la Ciudad de México (anteriormente conocido como el " Códice Grolier "), tardíamente en 1964, era genuino. This document of syllabic glyphs, in barked, folded pages, was completed no later than 1154, making it the oldest book in America today.

The Popol Vuh , the Mayan classic par excellence, tells us how the different indigenous peoples, speaking so many very different languages, all came together in the distant past, in the shared expectation of sunrise. Converging on the shores of the Atlantic Ocean, looking eastward, these diverse peoples were "bound together and exposed as oneness before the light." Let's read what the new translation of the Popol Vuh by Michael Bazzet has to say : "However many communities / that exist in the world today / however infinite the number of humans / The dawn is the same for everyone. " In this world facing both massive climate change and social disunity, Mayan ideas make more sense than ever. In his latest book , Alexis McLeod compares Maya philosophy to Chinese Taoism, with a view to identifying similar dynamics. It also underlines the relevance of

the Mayan cosmovision, for which our actions are part of the "permanent creation of the world", to apprehend our global world. The philosophy of the Maya thus teaches us that Creation is not something unique, which would have happened only once; Creation is an ongoing process.

At times, scientists' warnings about anthropogenic climate change in our 21st century seem to echo whole swaths of Maya philosophy, passages from its "Book of Advice" or Popol Vuh . It is now, more than ever, that it seems appropriate to think of our planet as a permanent recreation. Maybe it's time to stop thinking that we live in a stable world, created once and for all, a planet assembled four billion years ago. We could also consider that ourselves, and our actions, and each of our breaths, are so many parts of the continuous creation of the Earth - what the Maya could say.

In this way, we could see ourselves as co - creators, helping each other shape the world of tomorrow. This would perhaps be the best way to respond to the challenge of our global climate crisis , by uniting around a common objective that would materialize the need to think of ourselves as united. Because "the dawn is the same for all", we must consider all communities, all humans as "together linked and exposed as a unity

before the light".

If we add to this the Nahua philosophy of apprehension of a world in motion, always careful not to slip into the abyss while progressing on this slippery path of earth, along a steep cliff, which is the earthly life, we might be able to project ourselves into a new dawn - in philosophical terms. And who knows? One day, if we take the trouble to listen to them, the classical philosophers of Mesoamerica - whose descendants and cultural heirs are still alive, and carry this thought in Mexico, Guatemala, Belize and Honduras - could help us to get to know ourselves better.

Looking forward to that day, we still need philosophers who can act "like a mirror to others" - the only way to make us all cautious and alert to the consequences of our actions. Why do you think all this? To delay a new end of the world perhaps?



But what end of the world are we talking about? For Mesoamericans, it has already irretrievably taken place one night in October 1492, and has taken place continuously since that date: it defines the state of the world. The end of the world is white people.

The Yanomami shaman Davi Kopenawa, the author with Bruce Albert of this "fantastic" work which is *The fall of the sky*, to which Ailton Krenak pays homage in his little book, is also often in the vegetable garden. He goes there to work the land whenever things are going badly. And it's bad.

This evil, Antonin Artaud, before fleeing it, on the spot or in Mexico, among the Tarahumaras, designated it in the mouths of his compatriots as "the white evil": the simple passage on an island of a ship which does not contain only "healthy" people and causes the appearance of unknown diseases, diseases which, says Artaud, "are a specialty of our countries" - "shingles, influenza, flu, rheumatism, sinusitis, polyneuritis, etc., etc." To which, for five centuries of history stolen from the island-Continent Abya Yala, we must add all these machines of capitalist extraction of ore of lives, minerals, plants and animals, which, by working ineluctably through colonial space, covered the Earth with thick smoke.



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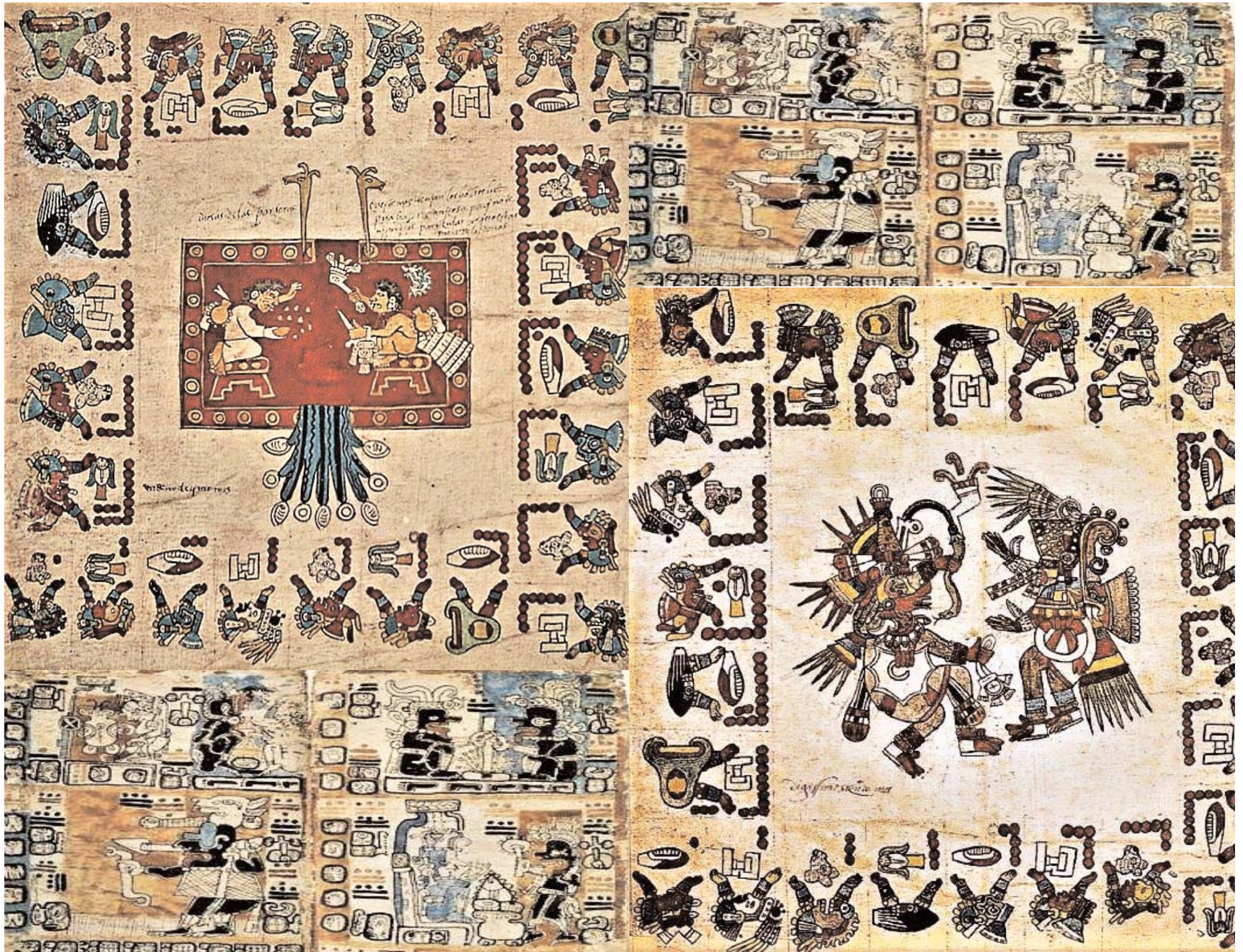
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Everything that, in our country as everywhere else where white evil has ended up spreading (since there is no doubt for anyone that it first declared itself on our side of the ocean), accomplishes by immunity adaptive, this formidable degeneration of the human that is his clientelization: his fundamental incapacity to add more world to the world without buying it in a box in a shop, in the state of merchandise - even like a book - in the price of immense destruction of resources. An acquired immunity which makes each of us, con-

sumers of objects and ideas, terrible asymptomatic carriers of the pathogenic agents of state capitalism and most often renews this conviction of innocence, which Artaud denounces as our lack of "culture", so characteristic of the white colonizers, "healthy" only to have stayed too long in a bath of urban dejecta and to have survived the fatal diseases they contracted there, by dying of them million.

The far-reaching thought and message of the little book that Ailton Krenak speaks to white people - through friendly and healthy scholars who have come to question him in his vegetable garden - if one cannot locate oneself at the point of contact where he has been with us for five centuries. It is true that the Indians feed the imaginations of many Brazilians, and even more perhaps of many Euro-Westerns, as it is true that almost all of their modern treatises on economics, politics and metaphysics, are based on theoretical fictions, most often racist, sometimes panegyric, of the modes of existence of "savage" peoples. The current pandemic in the world of the "healthy" has seen the hope of a social and political revolution inspired by Amerindian ways of relating to non-humans flourish in the French press, as if their example carried the possibility of a metamorphosis or a coming historical revolution of our own ways of life, thanks to which, in a final burst of consciousness, we could escape the impending catastrophe. Which is another way of denying the scope and the meaning of the intrusion of our absence of world in the Indian world, and more generally everywhere where a world existed, that is to say a community of communities of beings and specified people without speciesism, gendered without sexism, affiliated without racism. Car Ailton Krenak does not speak of the means of avoiding, nor even of postponing the end of the world.

The end of the world is not, from his point of view, what whites potentially have in front of them as a more or less long-term perspective of failure, because of their expensive way of living, we should rather say ' inhabit , the Earth and that, repentant, they could anticipate and ward off with the help of an Indian. The end of the world is white people. As Deborah Danowski and Eduardo Viveiros



forcefully remind us in *The Stopping of the World*, it has already irretrievably taken place one night in October 1492, and has continuously taken place since that date: it defines the state of the world. The war with the white enemy is long lost. It is since the defeat of his peoples that Ailton Krenak writes his *Ideas* - and this defeat has been until now, for us who are first, somehow, socialized by capitalism, assisted by the Nation-State, consumers of material goods and ideas, whether we like it or not, our victory. The end of the world is us, and nothing can survive what we are.

The poetry and creativity of the Amerindian "collective subjects", the strong, sensitive relationship they weave with everything around them, the technique of dreaming as a means of communing with the Earth, this "politics of dreams against the State", to use the beautiful expression of *L'stop de monde*, in short, everything that Ailton Krenak proposes as *Ideas* to delay the end of the world, it does not belong to any "traditional ethnic culture" (three terms forged by colonial Euro-Western anthropology), but stems from "a conscious strategy of resistance" to cosmocide, adopted and practiced in situation by collectives in contact with white evil and fully shareable and amendable by all who are still able in the present doomsday state to experience the pleasure of being alive. Because, these *Ideas* are not for the amphitheatres of the Universities, nor for the politicians who confuse the imagination of another possible world on the one hand with the reorganization of the social relations between the members of a "club of humanity" closed to other people, for example to our "sisters" the stones, and, on the other hand, with the regulation of the exploitation of natural resources by the sanctuary of "wild" spaces from which human collectives are inevitably excluded likely to dream them. A double lethal exclusion, of the non-human outside humanity and of humanity outside the non-human.

Ailton's *Ideas* Krenak are an invitation addressed to all those who are able to seriously think, that is to say to sing, that the Rio Doce flooded in November 2015 by 60 million tons of toxic mud is in a coma, that is- ie is still alive. To those who are capable of what the

Congolese anthropologist and philosopher Patrice Yengo calls "vitality", that is to say, who are able to intimately link their own living existence to all living beings, not to occur themselves alive without producing a world of the living, and above all to do so at the very place of death, under the impact of the massive devastation of the world by the forces of death of global state capitalism. To refuse the death that kills, the white death that has the incredible arrogance of claiming to be able to precipitate the living into nonexistence, - and to decide, according to the writer Sony Labou Tansi's expression from which Yengo likes to borrow, to die living. This is what "delaying the end of the world" means: it is delaying death by remaining alive after you have been killed, resisting relentlessly inflicted death, re-existing in death. Which is the exact opposite of the undead state to which the healthy doom those whose islands they invade. The refusal to die that death, the death that murders, is the choice, as Ailton reminds us. Krenak, of hundreds of indigenous people, "who are still very much alive, [who] tell stories, sing, travel, talk to us and teach us more than we have to learn from this humanity which is not that thing to part and the most interesting in the world, but which is part of the whole". This is why the *Ideas* for *Delaying the End of the World* do not ask for their assistance from whites naturally inclined, by their propensity to consider themselves healthy (as much from a medical point of view as moral and political), to express their commiseration to the indigenous peoples whose dignity they plunder without the slightest shame - "indigenous peoples" according to the full extension that Eduardo Viveiros de Castro gives, in Brazil, to this expression in *The Involuntaries of the homeland*: the Indian people, the black people, LGBT people, women's people; the peoples of all those who, "immanent to the earth", having the earth as their body, resist their subjugation by any alien transcendent authority and cultivate that precious constancy in disobedience which, curiously, the Whites call their "inconstancy". No, what concerns Ailton Krenak is the Whites: "how are they going to get out of this?" Because their victory has stopped protecting them so effectively from themselves and the effects are beginning to be felt on them. of their own greed to eat the Earth, so much so that they

come to realize the terrifying state of the world.

It is the same for the Amerindian cosmogony that the European missionaries try to eradicate. But what are they afraid of? Let's reread these words of Black Elk, Oglala shaman, as related by TC Mc Luhan in *Barefoot on Sacred Ground*:

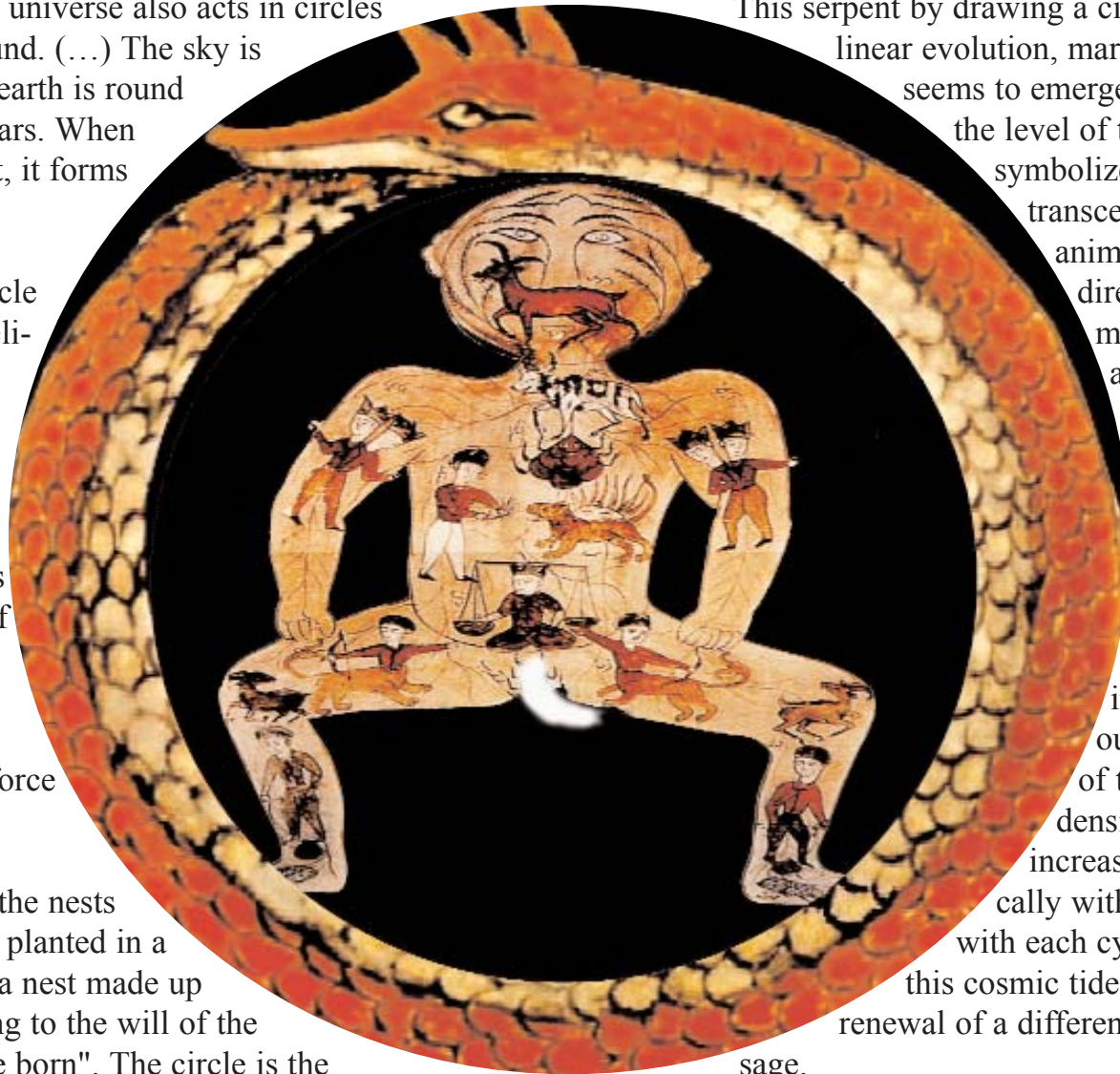
"You have noticed that everything the Indian does is in a circle. This is so because the power of the universe also acts in circles and everything tends to be round. (...) The sky is round and j 've heard that the earth is round like a ball and so are all the stars. When the wind blows at its strongest, it forms whirlwinds.

Birds make their nests in a circle because they have the same religion as us. The sun rises in a circle and sets in the same way. The moon does the same and both are round - Even the change of seasons forms a great circle and always returns to its starting point. The life of human beings describes a circle - from childhood to childhood - and so it is with everything that is animated by the force of the world.

Our teepees were as round as the nests of birds and they were always planted in a circle, the Ring of the nation, a nest made up of many nests where, according to the will of the Great Spirit, our children were born". The circle is the symbol of a philosophy that advocates the integrity of a way of life

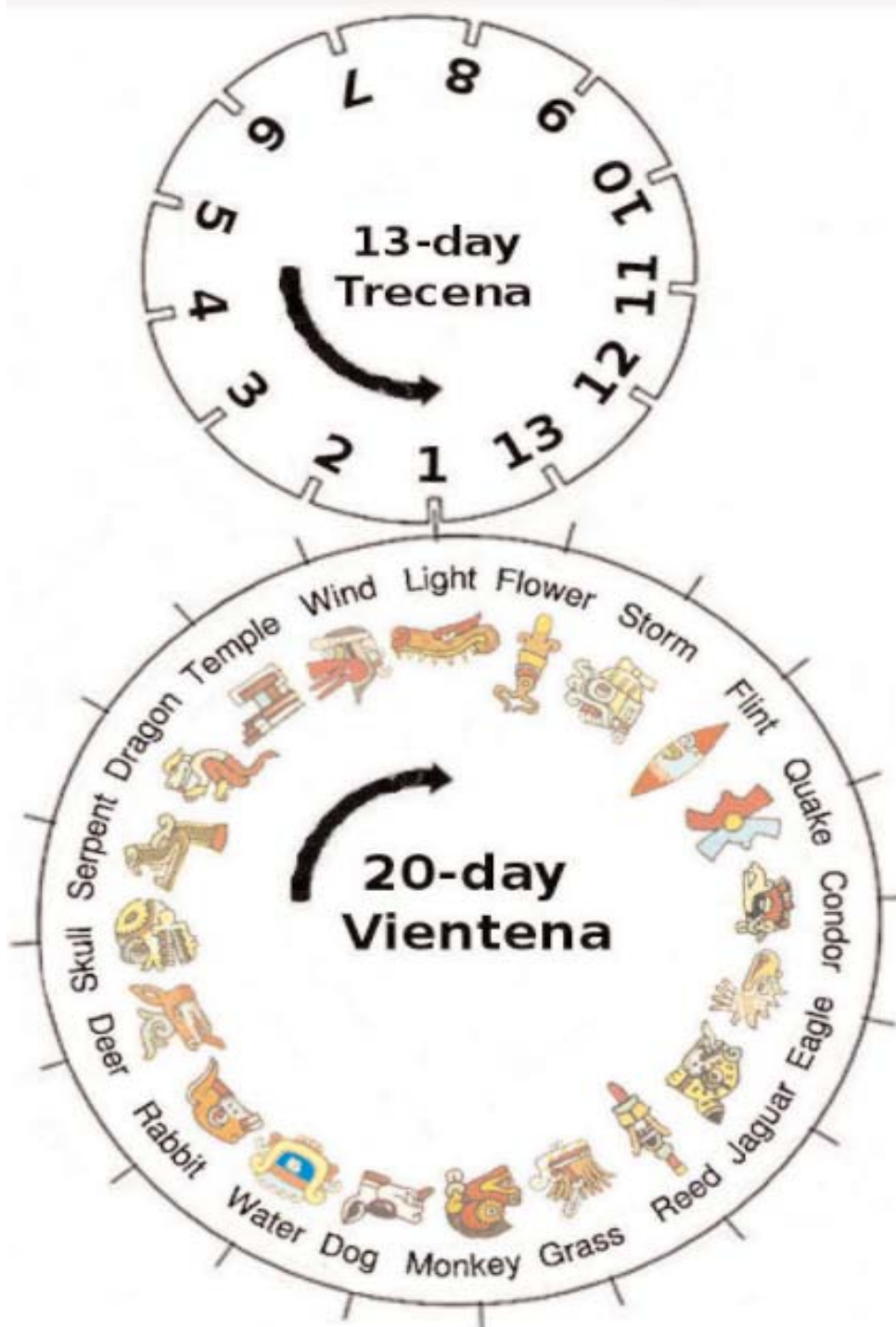
whose qualities have been proven by hundreds of generations; while the loss of the circle is a tragedy demonstrating the loss of social behavior of the members of a tribe or of a village.

How not to draw a parallel between these stages and the transcendent and liberating symbolism of "Ouroboros" the famous snake which "bites its tail".

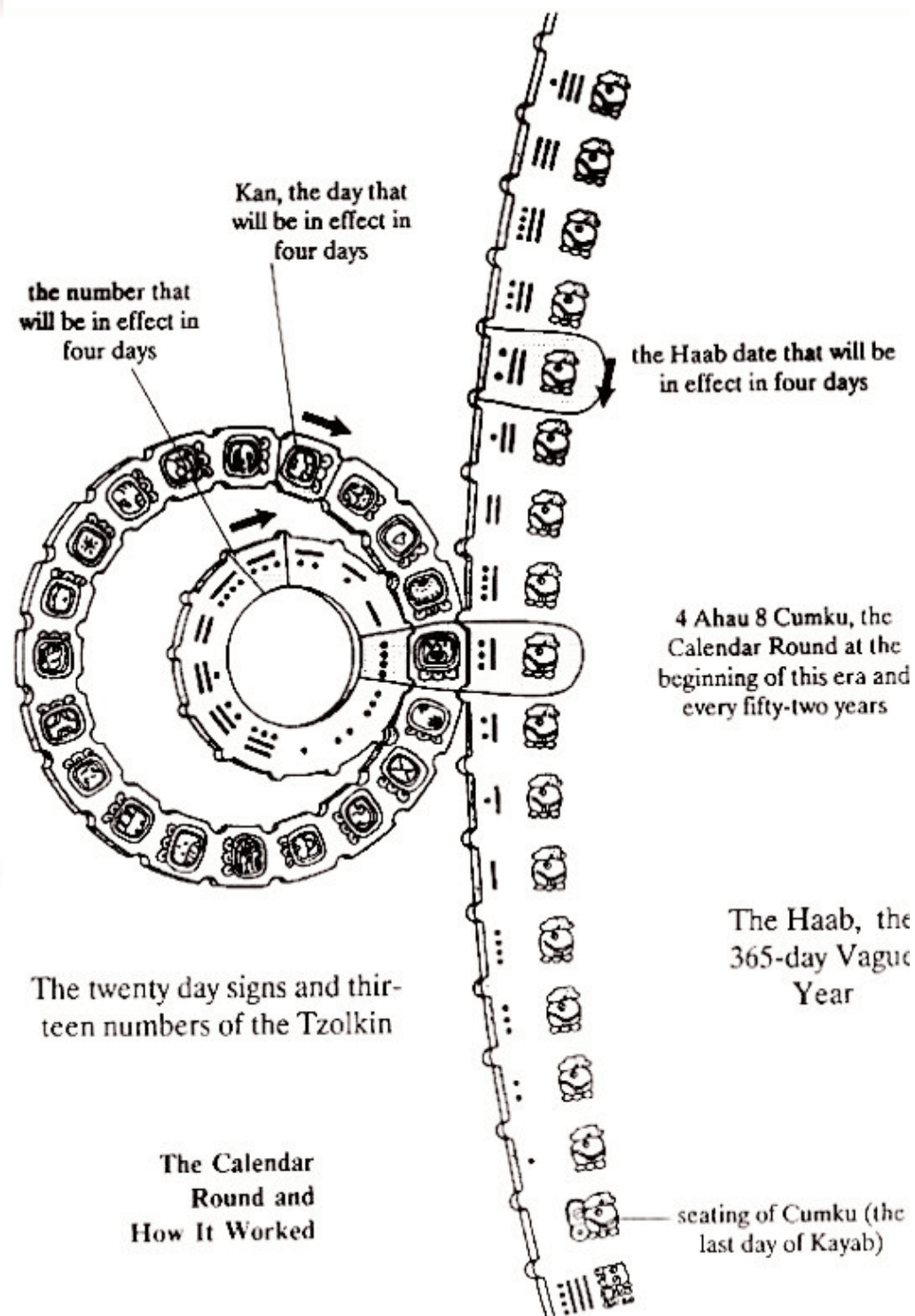


This serpent by drawing a circular shape, breaks with a linear evolution, marks a change such that it seems to emerge at a higher level of being, the level of the spiritualized being, symbolized by the circle; he thus transcends the level of the original animality, to advance in the direction of the most fundamental drive of life; and this ascending interpretation is based on the symbolism of the circle, a figure of cosmic perfection.

These alternating periods of expansion and contraction, a sort of cosmic tide, imply that energy is rigorously conserved on the scale of the universe and its flow of density follows a cyclic course increasing and decreasing periodically with time. As spring differs with each cycle from the previous one, this cosmic tide of energy involves the renewal of a different universe with each passage.



The Sacred Round



In the universe of shamanism, a unique order connects humans to the cosmic world via the "golden pillar", a sort of interconnection between natural living beings and supernatural beings. Nature, man, objects are all part of the sacred dimension of Earth and Heaven.

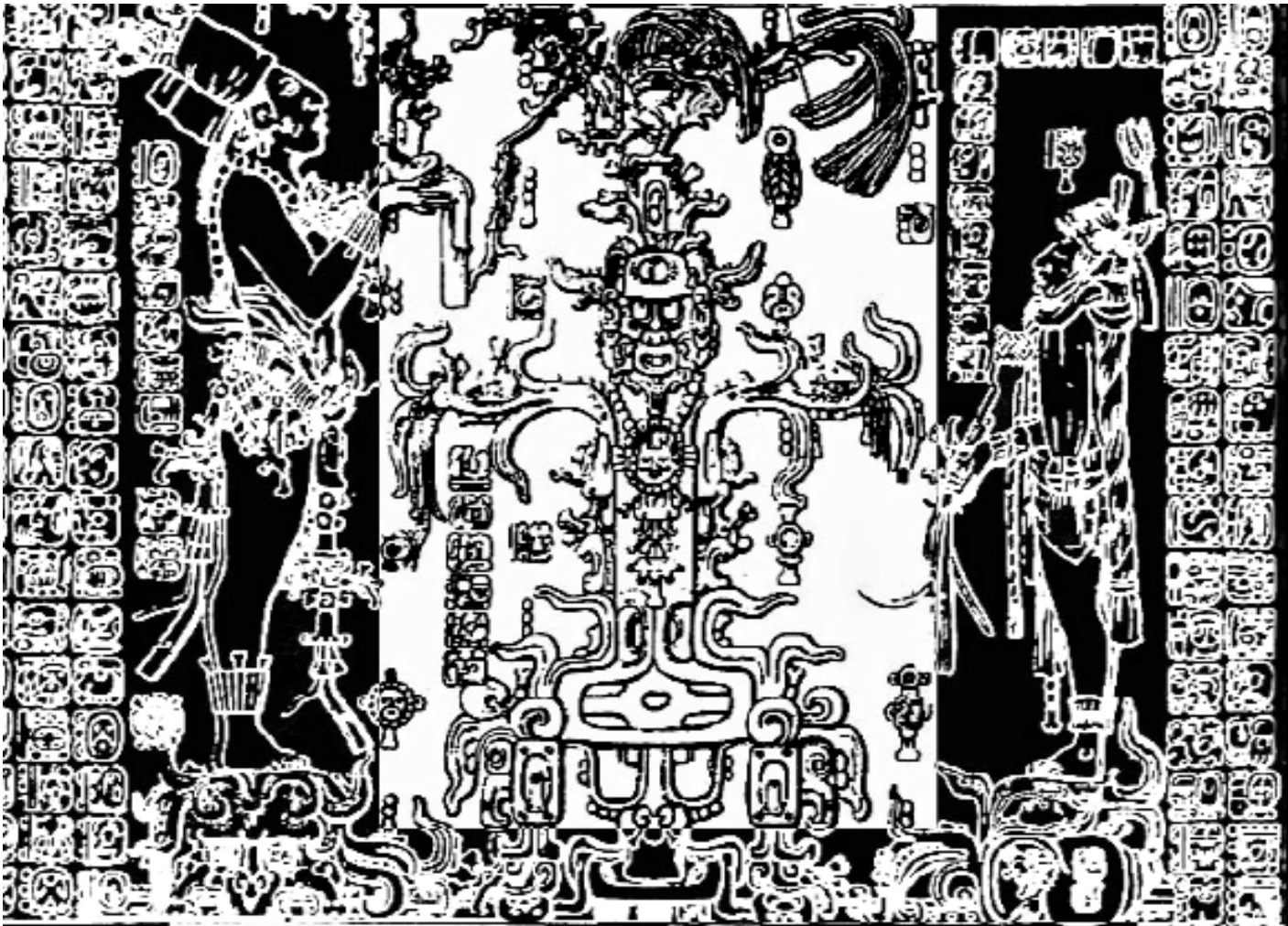
The world is cathedral and all living beings, humans, animals, plants and even all "inert" matter - sacred mountains - are carriers of souls. Inspired by shamanism, the Amerindian and Inuit cosmology also conceive of the presence of the Spirit (Isuma) in all natural forms and beyond all form. In the indigenous world, there is no place for the layman. The whole of life is sacred and this undoubtedly explains why no precise term translates the idea of religion as we know it sounds . They don't need God, they don't name him. They are not theologians who study the divine because they are the divine, are an integral part of it. The Inuit had the greatest respect for the living world (nuna). Like all Aboriginal hunters, they believe that the very act of hunting and killing for food is part of a powerful religious ritual. "The greatest danger of life, said an Inuk of Igluit , is that the food of men is entirely made up of souls. All the animals that we kill and eat have souls which do not perish with the body. and that we must appease so that they do not take revenge for our taking their bodies". This is why a piece of walrus or beluga liver is always thrown back into the sea, whether the dead seal is given fresh water to drink or the feathers of birds are stuck in the snow or the ground. . This form of spirituality also called "polysyn-

thetism" implies that any creature, as a starting point, can reach the Great Spirit since everything is His mysterious manifestation. This mystery gives natural forms a mystical meaning that combines order and harmony with the beauty it engenders.

The notion of respect is also essential in the Inuit culture because for the Inuit, a lack of respect towards an animal or a human can lead to difficulties during future hunts. The term " qikkutik " also corresponds to the shame or regret that a person can feel if they have disrespected an animal. The time is not so far when men and animals spoke to each other. The alliance between men and plants, air and water was obvious to all. Animals have stopped talking to men following the blunders of hunters disrespectful of rites or of women who have not maintained the right distance with the animal world, thus creating monsters, dwarfs, giants, mutants: the tupilaks . For them, their greatest fear comes from the certainty that failure to respect the rules of nature will lead to the disappearance of human beings or their return to the animal stage. As with most other indigenous societies, they considered living in harmony with nature to be their supreme "art".



This mystery gives natural forms a mystical significance which associates order and harmony with the beauty it engenders but also means that a formidable spiritual world rubs shoulders with human life from which one protects oneself by the creation of protective amulets. This is why the prehistoric Inuit never had a word for art



because they didn't need it. All the harmony of the cosmos, of the earth, including all living things, is part of the circle, a perfect form that generates life. Thus the tents, the igloos, the hearths are ovate like the fertile egg. The wise, gathered to make important decisions, sit in a circle. In a circle, all are equal so only wisdom, truth, justice can hatch, a philosophy very well articulated by the term miyupimaatisiium : "to be well in one's life".

It took us twenty-five centuries of Western philosophy, of scientific method to understand the metaphysical respect for all living beings by primitive peoples. Modernity will therefore have created scourges "which arise from man's claim to acquire superhuman knowledge in the name of which he becomes inclined to exercise over others an omnipotence that cannot be disputed."

So it was with the archaic peoples: instead of listening to them, we eliminated them. The collective gods of ancient religions associated with notions of peoples, nations, territories whether polytheistic or monotheistic are identity signs of a cultural and political nature. Spiritually speaking, they are conceptual errors and as the ethnologist de Brosse pointed out: "it would have been wonderful if the worshipers of the cat lived in good harmony with the worshipers of the rat." On the other hand, in primitive

societies, God did not no political or cultural identity. God exists only in relation to the "I" itself in relation to the community and the meaning of his whole life lies in his effort to find his place and fit into the totality of which he is a part. Instead of bringing everything back, rationally amalgamating into a single god fighting against other pagan gods, our Amerindian ancestors had intuitively felt that all forms of biodiversity converge naturally towards ONE (THE

GREAT MANITOU) and that all manifestations of God in matter, beings and forms, his "theodiversity", deserve to be respected.

Preceding all written knowledge, animism shows great respect to all beings of nature, because all would have a soul emanating from the Great Spirit that is the Universe. Rather than believing in determined spirits like angels, animism emphasizes an invigorating, mysterious, impersonal "power", present in everything: THE TOTEM.

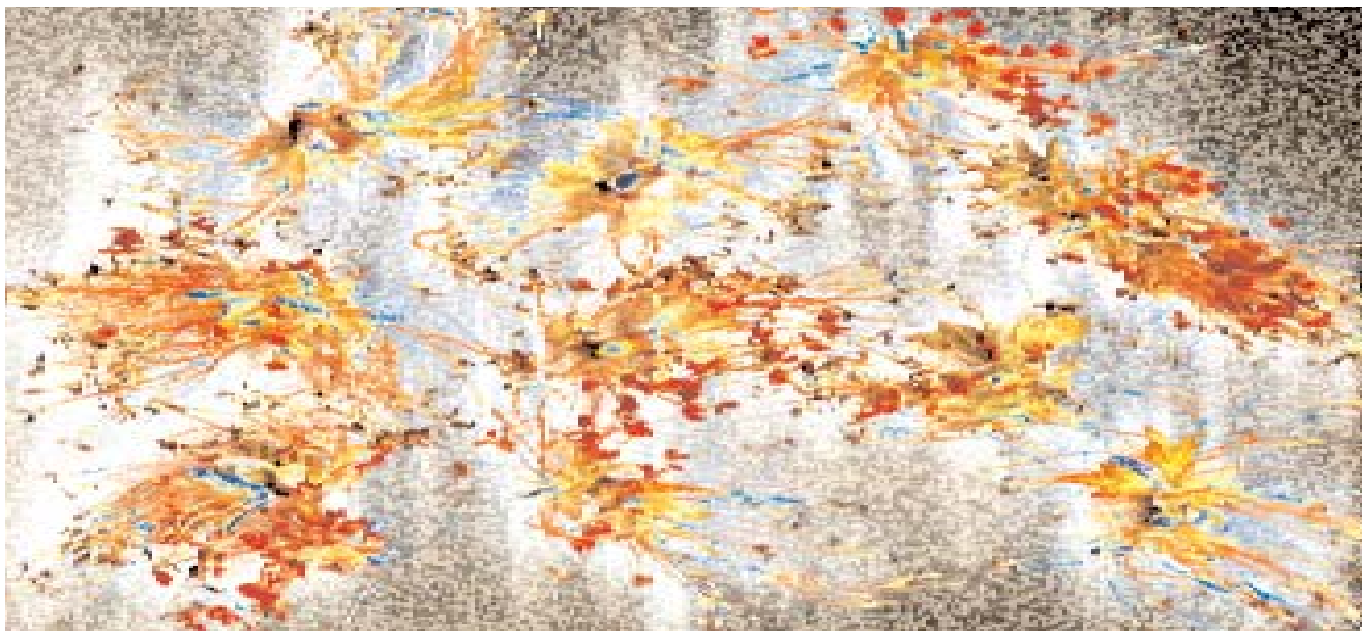
It is again important to specify that animism represents a force, a breath, a spirit, a "logos" present in all things. It is indeed an intimate relationship between man and the Universe not to be confused with collective totemism where a thing, a plant, an animal, a being, are invested with supernatural powers for social, cultural and policies.



This Amerindian philosophy of another age has however been verified by quantum philosophy. It will be up to the mathematician and physicist Louis de Broglie to formulate that each particle has a "look" outward called "psi wave" coupled to an interior memory called "field sigma " which allow a choice of behaviors according to the set of symbols that it has; this choice is therefore based on "memory points". Subsequently, Bell's theorem provides that a particle is capable of

immediately recording the change of state of another particle several light-years away. Each particle has a cumulative memory and its behavior increases by crossing thresholds, levels. What must be understood is that all the particles of the Universes have a set of symbols available to them, some particles will be high resolution others low much like the number of resolution points on a high definition TV screen versus a standard screen.

Scholarly Broglie calculations (fusion of particles with spin) enabled physicists to take a fresh look at matter. Thus the mineral world would have a set of 256 memory positions, the plant, next level, with its 65, 536 positions, the animal with its 4 billion memory positions, the human being with its 18 billion billion positions of memory and the next stage will give rise to an entity possessing 340 billion, billions of billions of billions of memory positions. (Charon, The Whole, matter, spirit, 1987)



If we place ourselves at the level of elementary particles and at the atomic level, we realize that stone, flower and whitecoat are identical. It is only at the level of the molecules that significant differences appear at the level of the differences in matter between the mineral world and the organic world. Thus the whitecoat appears much more structured than the flower and the flower more than the stone. The fundamental difference between the "inert" and the living

is quite simply that one is richer in information than the other and inside the living world, the species themselves all have almost an informational baggage identical to a few discomforts.

Life is therefore matter better informed than inert characterized by its evolution and there is indeed a

continuous passage from inorganic matter to life as observed on stromatolites, these stones which are called " bioconstructors ". These are rocks enveloped in a thin layer of microscopic bacteria that make up the living part of the rock. Stromatolites are therefore organo-sedimentary structures depository of the first manifestations of life on earth. We will then speak of " self-organized criticality ": from a critical development threshold, a system tends to spontaneously reach a higher level of organization or performance in a more complex mode. We are talking here about emergent properties. This evolution can be done either without transition, or go through a "chaotic" phase, like a kind of indecision. These finally become observable when they go in the direction of a new organization.

Richard Buckminster Fuller proposed to name "synergy" the combination of several functions ensuring the emergence of a single distinct function. Synergy (from the Greek synergos meaning "to work together") refers to the phenomenon in which several factors or influences acting together create an effect greater than the sum of the effects expected if they had operated independently. The Chilean researchers Maturana and Varela transposed the synergetic phenomenon to biology, which they called "autopoiesis" (Greek auto (one-self), and poiësis (production, creation). It defines the property of a system to produce itself and to maintain itself, to define itself. Henri Atlan, in an Interview in the newspaper Le Monde dated November 19, 1991, declares that the idea of self-organization "corresponds very broadly to the hypothesis of a program that would program itself.

An example of an autopoietic system is the biological cell. The cell is made up of various biochemical components, like nucleic acids and proteins, and is organized into limited structures like the cell nucleus, various organelles, a cell membrane, and the cytoskeleton. These structures based on an external flow of molecules and energy "produce" the components which, in turn, continue to maintain the contained structure, allowing the growth of these components. The first forms of life, probably bacteria, appeared nearly 3.5 billion years ago. 600 million years ago flat-bodied organisms, algae and plant mosses appear, followed by scorpions, spiders and crustaceans. Around 360 million years ago, the eusthenopteron foordi, the famous fossil fish discovered in Miguasha in Gaspésie (www.pc.ca/miguasha) having terrestrial breathing and being able to crawl, undertakes the difficult and perilous exit from the water and finds itself in a totally different environment where ferns, among others, reach more than 30 meters in height. Continental drift has only just begun. All the continents are united in a compact mass under the Equator. Even more incredible, in addition to breathing, our first ancestor moves by relying on articulated bones (our current limbs, legs and forearms).

Yes, man is a descendant of fish and evolution for several other million years became more complex: amphibians, dinosaurs, birds, primates (50 million years) and finally the arboreal Australopithecus (5 million years) our primate ancestor followed by Homo erectus (one million years) and Neanderthals (300,000 years) and finally Homo sapiens, our 40,000 year old immediate ancestor. According to André Bourguignon in *The Unexpected Man*: "the self-organization of matter into diverse and ever more complex forms has taken place through random oscillations, trial and error, trial and error, around an axis oriented in time. , whose two extremities are represented by a single entity: originally the simplest chemical species, the hydrogen atom; at the present time the most complex animal structure, Man". (in *Natural History of Man, The Unforeseen Man*, Volume 1, PUF, Paris. 1989, p.299)

Thus emerges an unavoidable constant, the purpose of life is to increase the Consciousness of the living and each cell continuously exchanges information with its environment to increase its "memory points". The construction of the human brain whose 1013 neurons once deployed in the cerebral connective are connected by 1015 synapses constitutes a performance that defies all imagination. Following the Broglian theorem, it goes without saying that henceforth, creation and evolution go hand in hand. At the current state of our knowledge, the big bang appears as a rupture, a sudden creation characterized by the evolution of information in matter until the appearance of life. Then this stock of information did not stop growing and for millions of years, our brain was constituted thanks to the exponential volume of cultural and technical information acquired by practice and transmitted by tradition. Creation and evolution then appear as two infinities: the Universe as infinite magnitude and the nature of our terrestrial world as infinity of possible temporal forms and diversity of living beings. Two seemingly contradictory universes yet united within a single totality: "vital momentum" and "evolution creative" forming a Whole itself in "continuous creation of unpredictable novelties" (Bergson, *Creative evolution in Works*, PUF, Paris, 1959, p.1331).

This "continuous creation of unpredictable novelties" encouraged Hegel, before, to think of a philosophy of history beyond that of man, it becomes the history of God lived through nature, time and men. . This history of the Absolute is "permanent revelation" by which the Being attends the engendering of the Absolute in the history of the World; what Hegel called "phenomenology" that is to say "the Spirit itself in the process of" phenomenolizing ", of constituting itself as a phenomenon. (Hegel G., The Phenomenology of the Spirit, Éditions Aubier, Paris, 1939)

Finally the whole of the Work, our Universe is auto engendering of the Absolute revealed by the knowledge of its history. In short, dynamic, in eternal movement, God like his work , like our Universe in an eternal process of continuous creation confines us to the permanent learning of a perpetual growing information (negen-tropy), such is the infinite.

Thus this diversity of levels of consciousness common to all species down to the smallest particles therefore forms a Unity specific to the entire Universe. Thus is perpetuated a conception of the sacred which associates the cosmic order with the personal responsibility towards the preservation of the balance, of the harmony of the Earth-Mother. European explorers brought back from America stories of incredible sacred rituals: sun dance (Sioux), hozho (Navajo), quest for harmony and other rites celebrating the cosmic renewal of the seasons. Not to mention the discovery of mountains and sacred lakes, mystical stones, shamanist songs with healing power. The entire space, living beings, plants, animals, air, fire, water, rain; all creation is pervaded by the presence of a supreme power. It is all of nature that speaks to man and reveals to him the greatness of the Great Spirit, of the Great Manitou who brings together within him the multiplicity of sacred mysteries.

"O Great Spirit, whose voice is heard in the wind and who with one breath animates the whole universe, listen to me. I am one of your children, small and weak. I need your help, your wisdom.

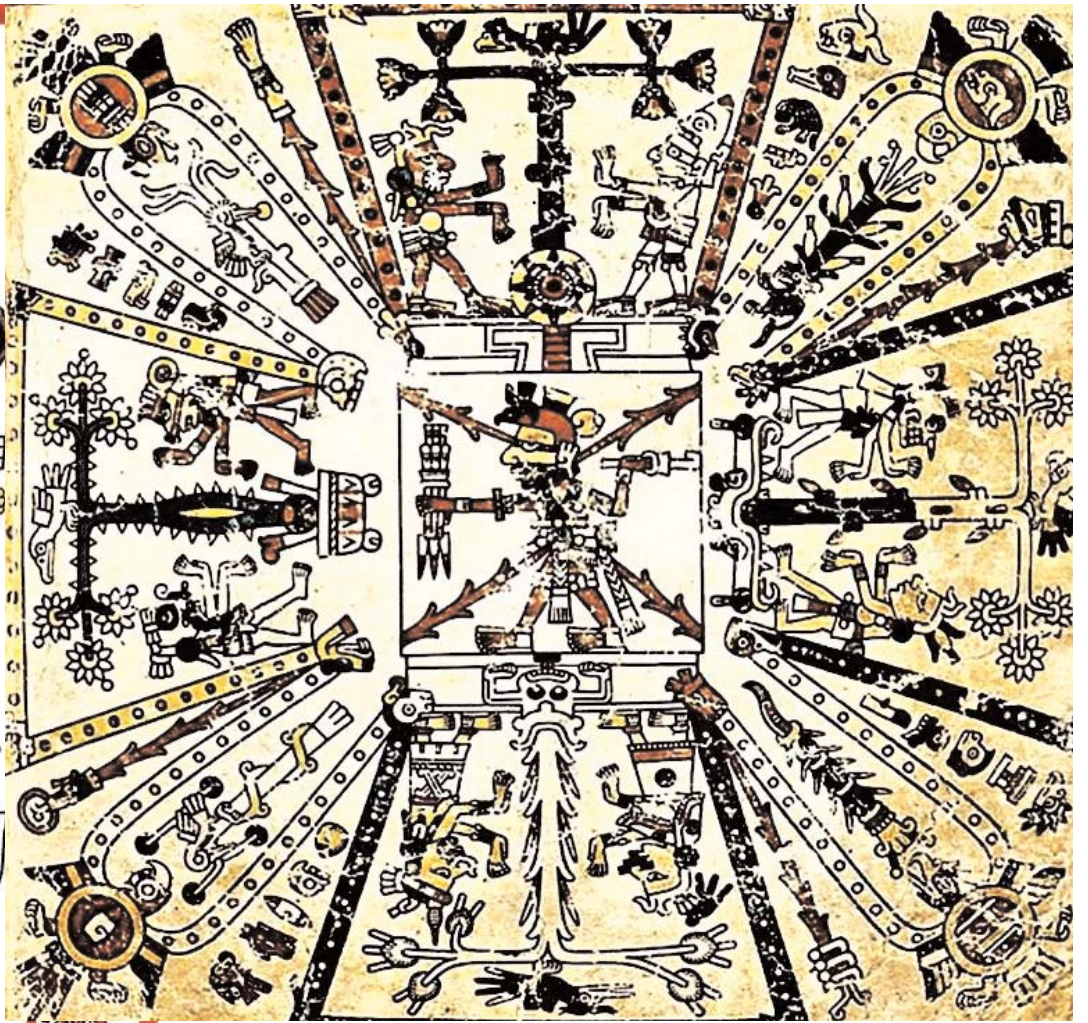
May my ears be attentive to your voice, may my eyes forever contemplate the splendor of a setting sun, may my hands respect your creation. Make me wise so that I learn what you taught my people: the lesson hidden in every leaf, under every rock.

I ask for the strength, not to be superior to my brothers, but to fight my greatest enemy: myself. Make me always ready to come to you with spotless hands and clear eyes. When my life fades like a setting sun, I want my soul to go to you with confidence."

Yet no story was fought as much by the institutions of the time as that of the noble savage as told in the stories of great travellers. It was inconceivable that primitive, generally friendly peoples could sometimes know more than we do without the aid of European philosophy, science and books including the Bible.

This finding is all the more disturbing in that it implies the following question: What good then are so many philosophies and systems if the man of Nature, who can neither read nor write, who knows neither Allah nor God, nor Jesus, exceeds us? The poet began to speak of these people and unknown lands with passion, the philosopher began to write about the natural rights of the natives, who were also wanted and loved by God. The greed of the European man, the intransigence of the servants of God and the fear of the elites brought the "civilized" answer to the question mentioned above.

"Schelling said in The Ages of the World that "anguish is the fundamental feeling of every living creature" By transforming this "natural" anguish into an artificially original fault, the priests Mesopotamians induced "fear of freedom and fear about freedom" so that the various kinds of neuroses appear only as hopeless forms of self-repression and self-destruction of human freedom."



"Over the millennia, the feeling of fear has produced and implemented, together with human reason, an organ intended to avoid anxiety-provoking situations...but this reason has turned against its objective by taking defensive measures which in turn spread fear, ad infinitum.... It is a matter of reason subject to the diktat of fear, fears that it has not ceased to aggravate for millennia, under the guise of eliminate them; such a reason must be defined quite simply as a morbid, pathological phenomenon; we are dealing, literally, with a reason which never ceases to create new pain and which forces man to suffer ever more from him itself and the consequences of its acts. (...) Ever since men have a history they have waged wars, ever more cruel and devastating wars. (Some scholars even affirm that war is the only and true religion of man.) What clues should therefore still be added to to be able to say that throughout history reason has only become more demented, and man ever more sick of himself? Nothing unmasks the sick animal in man so much as this unlimited hypertrophy of fear and violence.

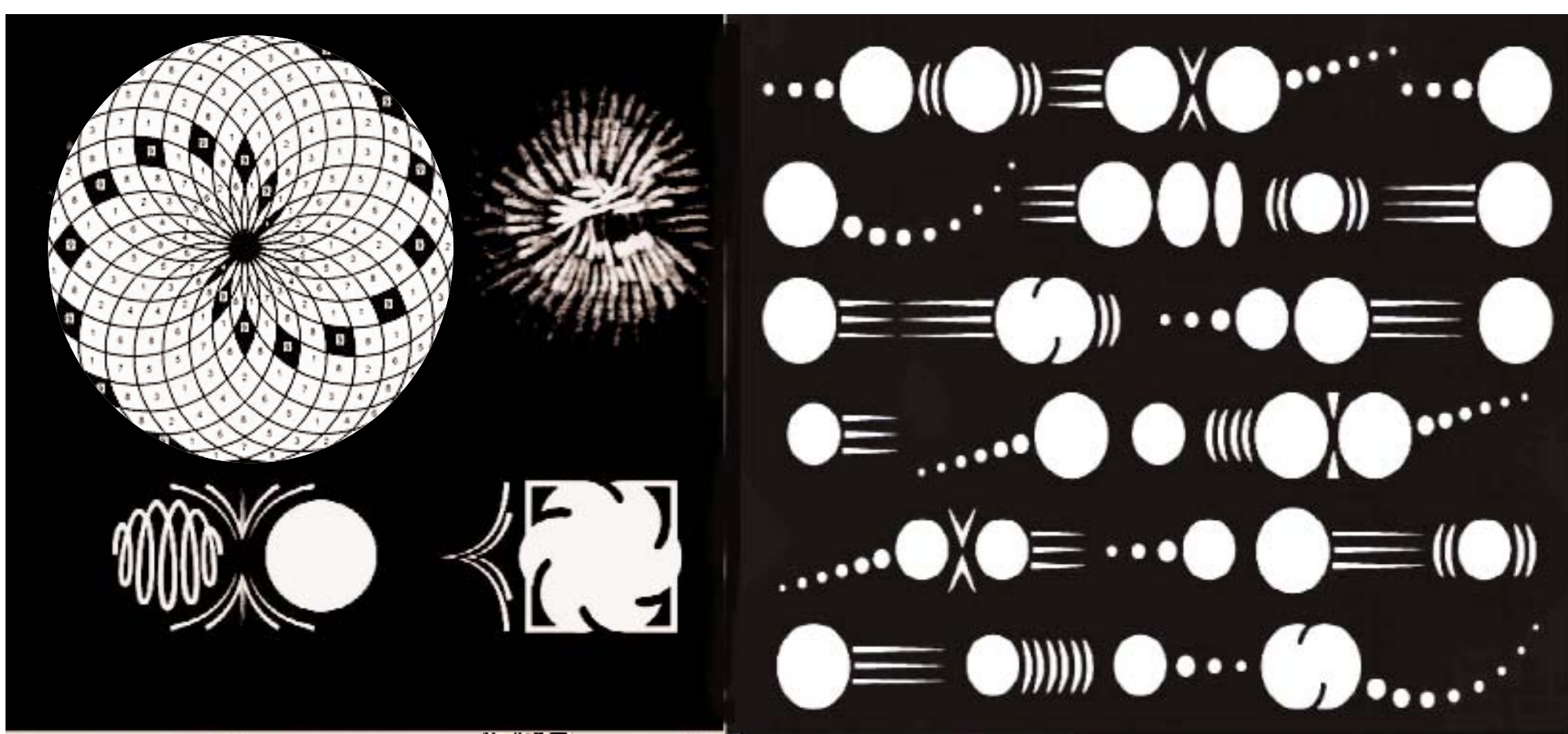
Western Christian white society is not left out and is just as nihilistic. The French, whose racism towards North Africans and Malagasy has reached repugnant dimensions. The Spaniards, who massacred with unprecedented brutality more than three-quarters of the Indians of South America, the Dutch slavers who enslaved the local populations of South Africa, the Italians who, barely half a century ago, attacked Ethiopia, one of the poorest countries in Africa, with a rare courage with poison gas, the British who enslaved and exploited almost half the world, repeatedly fired on the Indian crowds and put the Native American tribes of Canada on reservations. The white Afrikaners who organized "native parties" where the game was replaced by black natives.

This is what "delaying the end of the world" means: it is delaying death by remaining alive after you have been killed, resisting relentlessly inflicted death, re-existing in death. Which is the exact opposite of the undead state to which the healthy doom those whose islands they invade. The refusal to die that death, the death that mur-

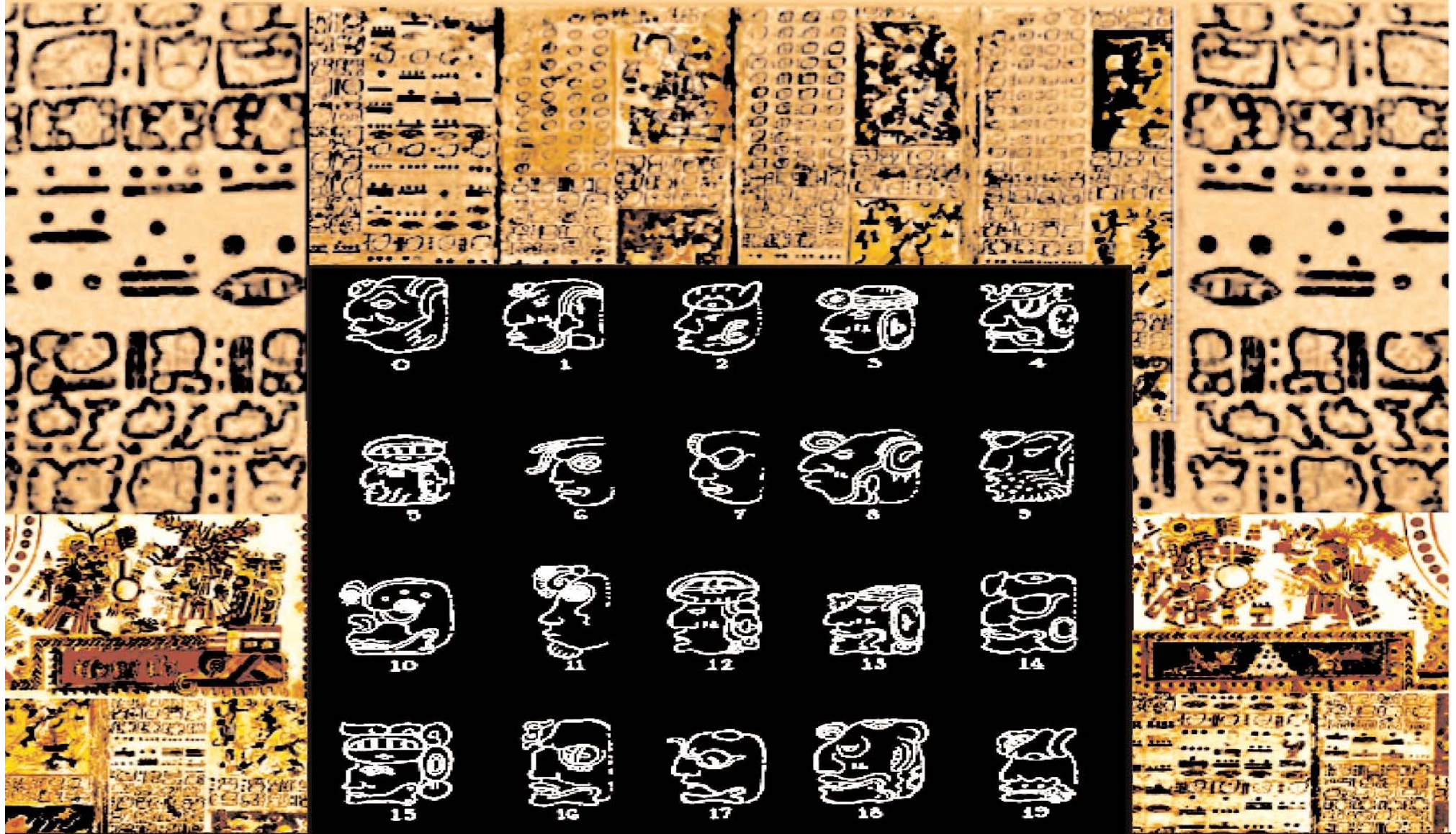
ders, is the choice, as Ailton reminds us. Krenak, of hundreds of indigenous peoples, "who are still very much alive, who tell stories, sing, travel, talk to us and teach us more than what we have to learn from this humanity which is not this thing apart and most interesting in the world, but part of the whole".

But the other good existential question now is "how are white people going to get out of this?" to make themselves felt on them of their own greed to eat the Earth, so much so that they have just become aware of the terrifying state of the world. Will they be able to be free enough to give a damn about being white and learn to dream of something other than themselves? And find, in doing so, the good idea to delay their own end of the world.

But what good idea coming from whites holds water? What idea of Western reason can merge with Nahua or Maya philosophy?



$$\Delta \mathbf{E} - \frac{1}{c^2} \frac{\partial^2 \mathbf{E}}{\partial t^2} = 0 \quad \Delta \mathbf{B} - \frac{1}{c^2} \frac{\partial^2 \mathbf{B}}{\partial t^2} = 0$$



NATURPHILOSOPHY , associated with the romantic movement in the 19th century, is intended as the response to the mechanistic view of the world. From the teachings of archaic traditions, alchemist and occult practices, she takes on board the feeling, the intuition of a solidarity between man and the world. Rooted as much in mysticism as in poetry, the originality of naturphilosophy lies in the elaboration of a metaphysical concept which allows the union of East and West in the same system of thought, the same which will be at the origin of the hippie movement of the 1960s, a century later.

The romantic philosophers of nature consider it, like the Chinese Tao, as a Whole whose dynamics are based on the play of opposites as in the I-Ching . Goethe called this perpetual conflict of elements both opposed and united in their interaction polarity. The diversity of living beings (the multiple) is the result of the diversification of a unique and original form which reflects the continuity and increasing complexity of matter and life. "The absolute, as the ultimate foundation of all that is, is expressed both as Spirit (One) and as Nature (Multiple): they express it in an equivalent way. Each of them manifests the constitutive polarity of the whole : subjectivity/objectivity, freedom/necessity, ideality/reality". (France Farago)

The perception of unity is an inescapable premise that the philosophers of nature apply to the external world, but which has its source in an entirely interior and properly spiritual experience: this starting point is that of the mystics of all times, regardless of their religious origin for which the primitive datum is divine unity.

"Tend with all your strength to rediscover the primordial Unity of Matter and Spirit". (Lao-Tzu)

According to Goethe, again in The Metamorphosis of Plants, "each of the forms engendered by nature is a Gestalt (configuration) which, while particular, differentiated from all the others, integrally expresses the totality of which it is the manifestation".

The perception of unity is an inescapable premise that the philosophers of nature apply to the external world, but which has its source in an entirely interior and properly spiritual experience: this starting point is that of the mystics of all times, regardless of their religious origin for which the primitive datum is divine unity, from which they feel excluded and where they aspire to return by way of mystical illumination. All romantic artists, all naturalist thinkers will explain that the process of terrestrial and cosmic becoming passes through a return to the lost unity. The march of life towards reintegration is inevitable, the march of man towards rediscovered harmony too.

The diversity of species, the complexity of natural structures all oppose fragmentation through cooperation. Nature is not divided, on the contrary it forms an extremely complex, dynamic and interactive whole. Diversity through interbreeding. Preceding all written knowledge, animism showed great respect to all beings of nature, because all had a soul emanating from the Great Spirit that is the Universe. Rather than believing in determined spirits like angels, animism emphasizes an invigorating, mysterious, impersonal "power" present in everything. It is again important to specify that animism represents a force, a breath, a spirit, a logos present in all things. It is indeed an intimate relationship between man and the Universe not to be confused with the collective totemism of archaic tribes where a thing, a plant, an animal, a being, are invested with supernatural powers for social, cultural and political.

"Where is the life we lost living.?" (TS Eliot)

It will be up to Schelling to conceive the central theme of naturphilosophy and to "show how all the differences are abolished within the Absolute". In Introduction to the Philosophy of Mythology and in The Ages of the World, he rehabilitates the myths archaics of the Origins by describing them as a kind of unconsciousness of humanity: the collective unconscious so dear to Jung.

Thus prehistory is the period when the inner movements of consciousness gave birth to myths as the beginnings of spirituality in direct relation with nature.

According to Jean Brun in *Philosophie de l'histoire*, the myth ensured a double function, firstly: "the expression of the creative and inventive power of the man who would have projected in exemplary, warning, explanatory or consoling myths, the fears or the desires of a humanity confronted with an incomprehensible and threatening nature". Secondly: "such myths, full of majesty and poetry, were precious witnesses of the human intellectual power which had been able to make them true works of art characteristic of a culture and an era, or the transpositions eternal psychological problems".

Naturphilosophy, one suspects it, will have a considerable influence on modern science because to reflect on the concept "Absolute/Nature", "Body/Spirit" is to participate in the knowledge of the world. It is wrong to oppose myth against science since history forms a whole which must be taken into account. Thus only a knowledge that includes tradition and science can claim a "Knowledge founding all knowledge".

Thus at the beginning of the twentieth century, the modern gaze replaced primitive simplicity with scientific complexity. However, it is indeed the same nature, only the perception that we have of it changes.

Life results from the general tendency of matter to organize systems creating order from disorder (Prigogine) whose movement is oriented from unity to diversity, thus developing ever more complex structures where, paradoxical thought obliges, one is also everything.

It was during the Renaissance that certain naturalist animist precepts finally appeared again timidly from the *Corpus Hermeticum*, a Latin translation of an ancient Greco-Egyptian philosophy, originat-

ing in Alexandria. This time, an ancient cosmology, linked to metaphysics and Greco-Roman philosophy largely inspired by the speculations of Arab alchemists, forms a completely new corpus of texts. In short, all the "naturalism" excluded from biblical monotheisms came back in force on the margins of both theology and science. Although hermeticism, a philosophy thus named in honor of Hermes Trismegistus, dates from the beginning of the Christian era, it will be known in the Christian West only in the 15th century after passing through the Arabic editions of the 10th century. Among his writings are:

"Verily, certainly and beyond doubt, whatever is below is like what is above, and whatever is above is like what is below, in order to work miracles of a thing. Thus all things proceed from the One by mediation of the One, from which they are born by adaptation. His father is the sun and his mother the moon. The wind carried him in his body. His nurse is the earth. (...) The microcosm is created according to the prototype of the macrocosm. For this and in this way marvelous applications are made".

From these principles stated by Hermes, let us remember that there is reciprocity between the forms of nature (below) and the realities of the spiritual, cosmic world. From the Unique origin comes the multiple. As in the Chinese yin and yang, two complementary principles, the sun and the moon, are the progenitors of beings and things in correspondence with the qualities of the microcosm and the macrocosm. This vision of the natural order will be at the origin of most disputes, mainly artists and poets of the time, against mechanization, the industrialization resulting from the Scientific Revolution. Moreover, one feels in Goethe a strong influence of hermeticism.

Goethe called "polarity" this perpetual conflict of elements at once opposed and united in their interaction. The diversity of living beings (the multiple) is the result of the diversification of a unique and original form which reflects the continuity and increasing complexity of matter and life.

If we place ourselves at the level of elementary particles and at the atomic level, we realize that stone, flower and whitecoat are identical. It is only at the level of the molecules that significant differences appear at the level of the differences in matter between the mineral world and the organic world. Thus the whitecoat appears much more structured than the flower and the flower more than the stone. The fundamental difference between the "inert" and the living is quite simply that one is richer in information than the other and inside the living world, the species themselves all have almost an informational baggage identical to a few discomforts.

Life is therefore matter better informed than inert characterized by its evolution and there is indeed a continuous passage from inorganic matter to life as observed on stromatolites, these stones which are called "bioconstructors". These are rocks enveloped in a thin layer of microscopic bacteria that make up the living part of the rock. Stromatolites are therefore organo-sedimentary structures depository of the first manifestations of life on earth. We will then speak of "self-organized criticality": from a critical development threshold, a system tends to spontaneously reach a higher level of organization or performance in a more complex mode. We are talking here about emergent properties. This evolution can be done either without transition, or go through a "chaotic" phase, like a kind of indecision. These finally become observable when they go in the direction of a new organization.

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Henri Atlan, in an Interview in the newspaper Le Monde dated November 19, 1991, declares that the idea of self-organization "corresponds very broadly to the hypothesis of a program that would program itself.

For modern physics, the Universe would therefore be made up of elements that all contain primordial information like a cell contains the whole genetic program of an individual, like a hologram, contains everything in each part. Indeed, each part of a holographic negative contains the entire image. So, if I tear the negative to keep only a tiny part, it will still contain the entire image. Another example, each digital image is made up of millions of pixels, now imagine that each pixel contains the entire image while being distinct to understand that each rock, each animal, plant, molecule, atom in the Universe has the configuration from the whole.

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Thus emerges an unavoidable constant , the purpose of life is to increase the Consciousness of the living and each cell continuously exchanges information with its environment to increase its "memory points". The construction of the human brain whose 1013 neurons once deployed in the cerebral connective are connected by 1015 synapses constitutes a performance that defies all imagination. Following the Broglie theorem, it goes without saying that henceforth, creation and evolution go hand in hand. At the current state of our knowledge, the big bang appears as a rupture , a sudden creation characterized by the evolution of information in matter until the appearance of life.

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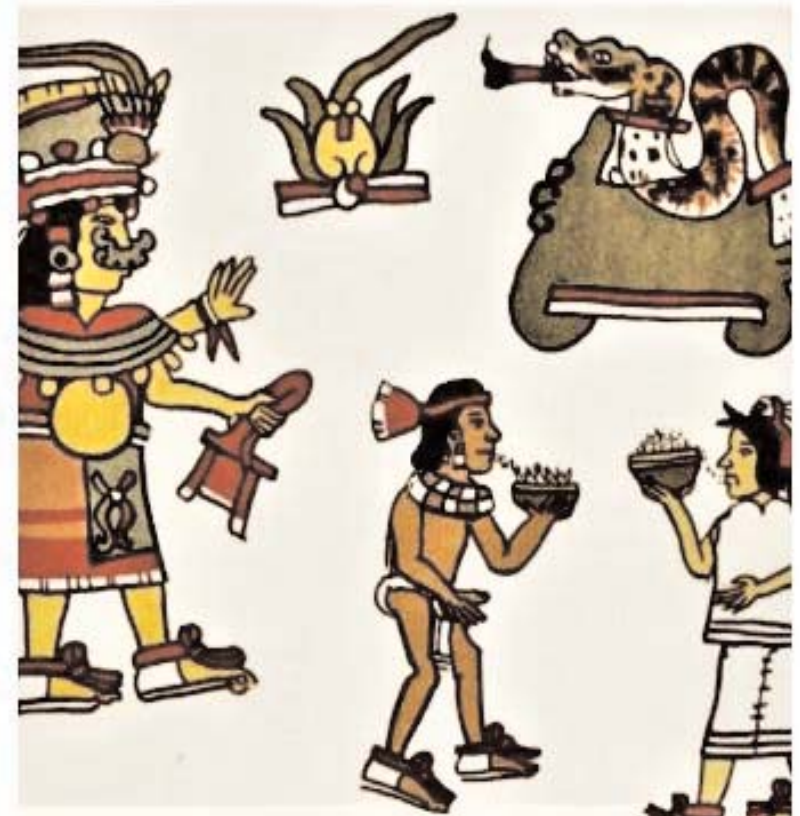
Creation and evolution then appear as two infinities: the Universe as infinite magnitude and the nature of our terrestrial world as infinity of possible temporal forms and diversity of living beings. Two seemingly contradictory universes yet united within a single totality: "vital momentum" and "creative evolution" forming a Whole itself in "continuous creation of unpredictable novelties". (Bergson, *The creative evolution in Works*, PUF, Paris, 1959, p.1331).

This "continuous creation of unpredictable novelties" encouraged Hegel, before, to think of a philosophy of history beyond that of man, it becomes the history of God lived through nature, time and men. . This history of the Absolute is "permanent revelation" by which the Being attends the engendering of the Absolute in the history of the World; what Hegel called "phenomenology" that is to say "the Spirit itself in the process of" phenomenolizing ", of constituting itself as a phenomenon. (Hegel G., *The Phenomenology of the Spirit*, Éditions Aubier, Paris, 1939)

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the Absolute revealed by the knowledge of its history. In short, dynamic, in eternal movement, God like his work , like our Universe in an eternal process of continuous creation confines us to the permanent learning of a perpetual growing information (negen-tropy), such is the infinite.

Twenty years later, Bergson's brilliant intuition of the continuous evolution/creation of the Universe forming one and the same negentropic system will be strongly ennobled by the appalling discovery (1929) of Edwin Hubble on the expansion of the Universe. When the now famous astronomer had established that the spatial redshift of galaxies was proportional to their distance, the most astonishing evidence had to be admitted: the Universe is still exploding, expanding like a "program which programs itself", in the process of "phenomenalizing " since the big bang to use Hegel's expression.



In 1904, the great mathematician Ernst Zermelo formulated a theorem considered the crowning achievement of modern mathematics and of all set theory:

" Any set can be well ordered"

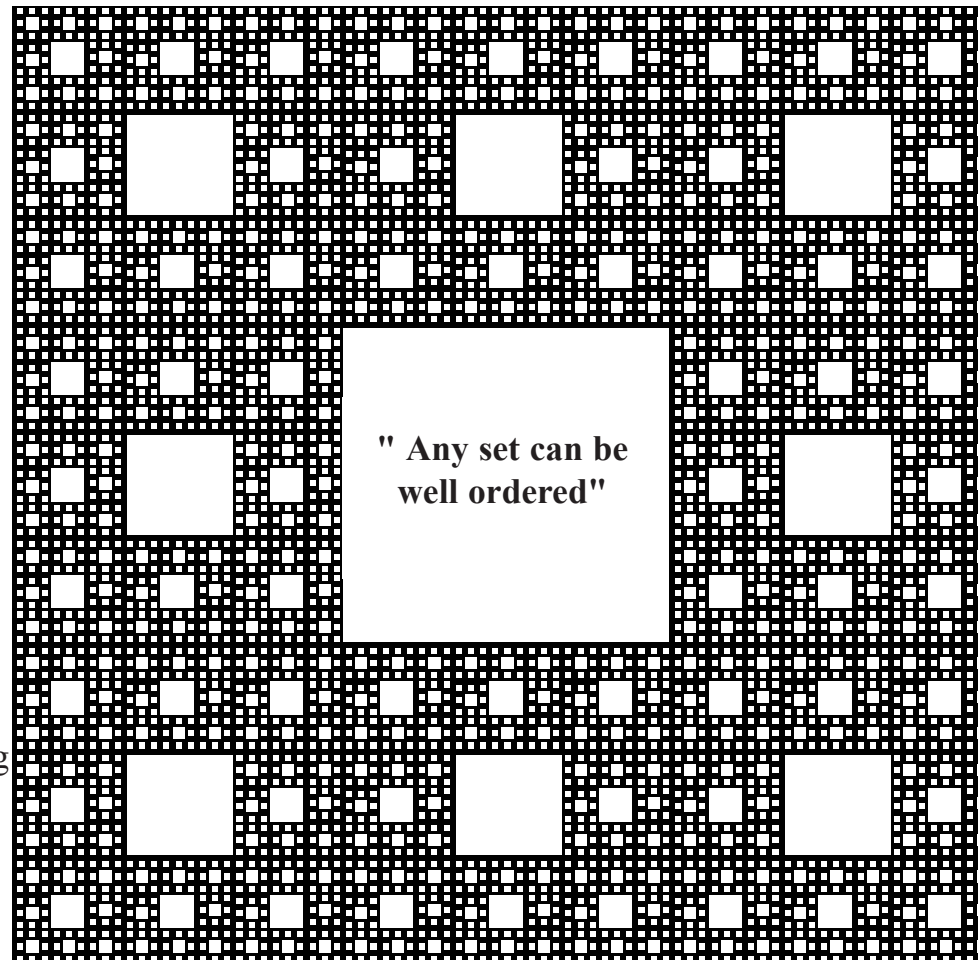
"What Zermelo demonstrated is that any set whatever it is has a relation of choice allowing the totality of the elements of the set to be well ordered. This is a result of great significance, because it is applies to all sets...and therefore to the set of all possibilities, that is to say to Being as well as the Universe". (Charon, *The lights of the invisible*, 1985, p.122-123)

Thus our body, our reason has the relation of choice making it possible to be ordered with the great laws of the universe but also has a choice of relations which can disorder it. Lack of understanding of the great laws of the Universe, of life and of nature is equaled only by ignorance of our planet, of its ecosystem, ultimately of our own body. Pollution, among other things, becomes the expression of a bad choice of freedom preventing from properly ordering all the elements of the whole.

The characteristic feature of the first peoples is the conception of the body as a miniature replica of the cosmos in direct communion with the surrounding nature. The body is the bearer of meaning revealed by ornamentation, the cosmetic of the Greek "kosmetikos

", which "consists therefore in clothing oneself with cosmic qualities", in becoming, in a way, "in conformity with the cosmic order". The primitive body paintings and the dance/trance express a cosmic wisdom inscribed in the body in harmony with the rational intelligence of nature.

Thus the Universe is a continuous creation of primordial information, of the order of the spirit materialized in the living as primordial sensation, order of nature.



Thus, as Pascal thought, nature as "infinite in flesh and bones", is the "spirit in action" and man, both body and spirit, because free and conscious is capable of progressing indefinitely in the domain infinity of knowledge. Man will never be outside of nature since the essence of nature is at the heart of man; nature, like man, is unfinished. (Conche Marcel, *Philosopher ad infinitum*, PUF, Paris, 2005, p. 130-161)

Anaximander has already seen the essential of nature: that it is unfinished. there is only it, but yet an open infinity, since it is nothing other than continuous creation . 'infinite, whichever way one turns' (Vors . 12 A 17) - that successive and succeeding each other in infinite time, some begotten , the others

destroyed: and this can have no end, says Aristotle (explaining Anaximander's position), "for the generations and the destructions of the worlds necessarily suppose movement, which will always exist".

Les deux notions d'Égalité

Identité :

Type « $A = A$ »

$$0 = 0, 1 = 1$$

$$2\pi = 2\pi$$

mais JAMAIS

$$0 = 1, 0 = 2\pi$$



Équivalence :

Type « $A = B$ »

$$0 = 0, 1 = 1$$

$$2\pi = 2\pi$$

mais aussi

et SURTOUT

$$0 = 1 ! 0 = 2\pi !!$$

$$0 = \infty !!!$$



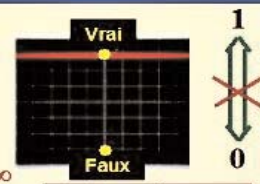
Logique correspondante

Negation

Alpha $\neq$ Omega

$$\begin{matrix} 0 \\ 0 \\ 0 \end{matrix}$$

$$\begin{matrix} \omega \\ 2\pi \\ 1 \end{matrix}$$



~~A~~ ~~NON-A~~

Logique Négative, Continue, Statique, **LINEAIRE**, celle d'un Univers NON-TOTAL

Alternation

Alpha = Omega !

$$\begin{matrix} 0 = \omega \\ 0 = 2\pi \\ 0 = 1 \end{matrix}$$

$$0 = \pm \infty$$



$A \neq B$ ET $A = B$!



$A \Leftrightarrow \text{NON-A} !$

Logique Alternative, Cyclique, Dynamique; Logique **FRACTALE**, celle de l'Univers **TOTAL** !

In summary, the evolution of the Universe, of nature including our own, is not over. Bergson's creative evolution published in 1907 demonstrates that creation is not synonymous with beginning but with continuity.

Only one planet

For Humboldt, the general equilibrium of the planet is the result of an infinity of balancing mechanical efforts and chemical attractions. Describing the Earth as a dynamic physiological system in perpetual evolution, it anticipates by more than a century the Gaia hypothesis formulated by the English climatologist James Lovelock in the 1970s. He understood very early that if the Earth is a single organism and interconnected, it could be catastrophically damaged by human activities.

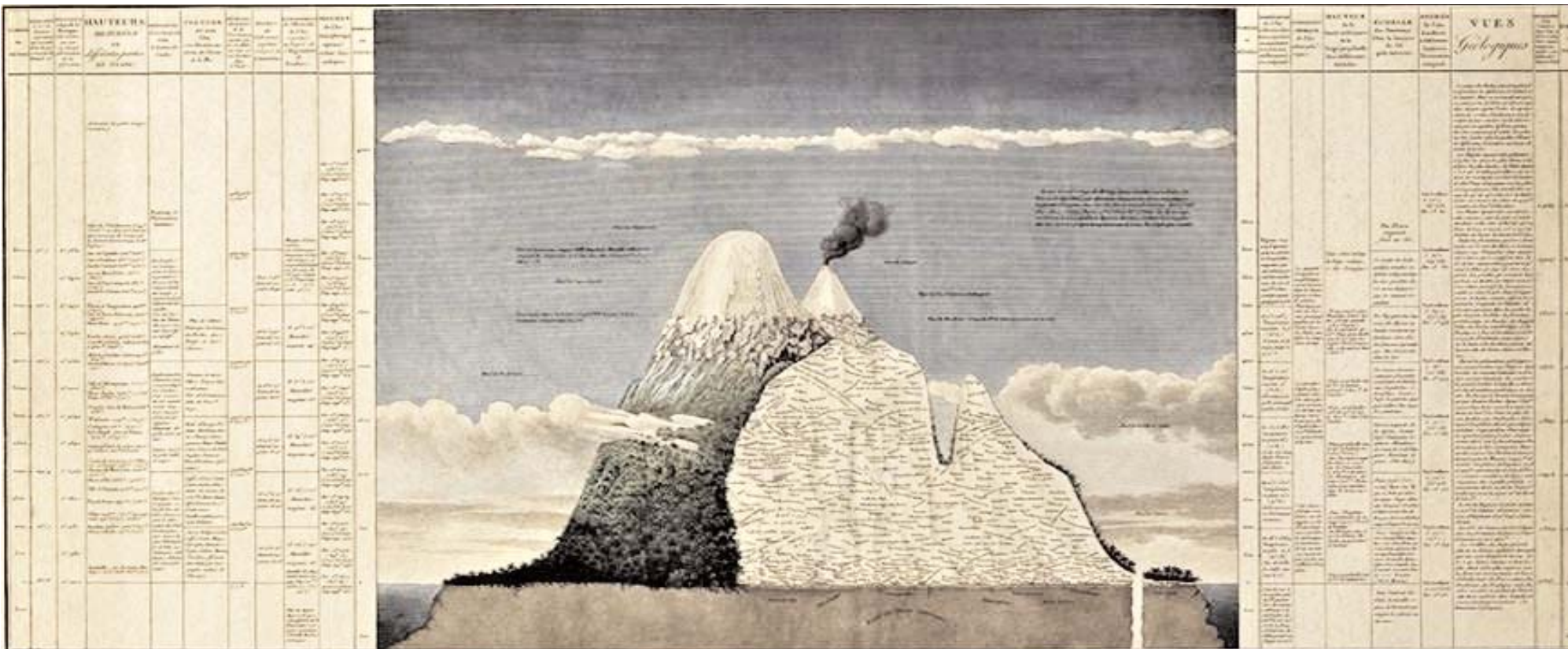
A true prophet of the Anthropocene, Humboldt lists the three ways in which the human species influences the climate: deforestation, excessive irrigation, and the "great masses of steam and gas" generated by industrial activities. A worthy heir to Humboldt's theories, George Perkins Marsh published in 1864 the book *Man and Nature*, or *Physical Geography Modified by Human Action*. The more pessimistic original title, "Man as Disruptor of Natural Harmonies", was refused by his publisher who feared that it would harm sales... In this work, Marsh, like Humboldt, still insists on the fact that all the elements of nature are connected. He evokes the disasters of deforestation, explaining the importance of the invisible ecosystem services provided by forests. Thus, according to him, the more the forests disappear, the more the soils become impoverished, the more the biodiversity decreases and the more the climate changes.

Man and Nature denounces the misdeeds of economic and industrial omnipotence. The book tells "a story of destruction and greed, extinction and exploitation, depleted soils and torrential floods."

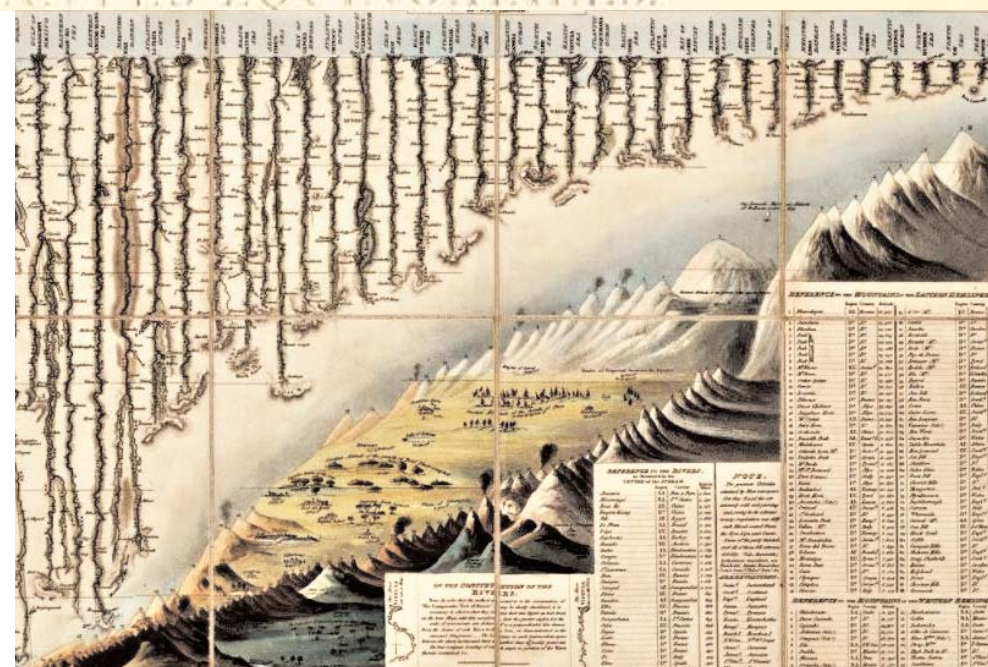
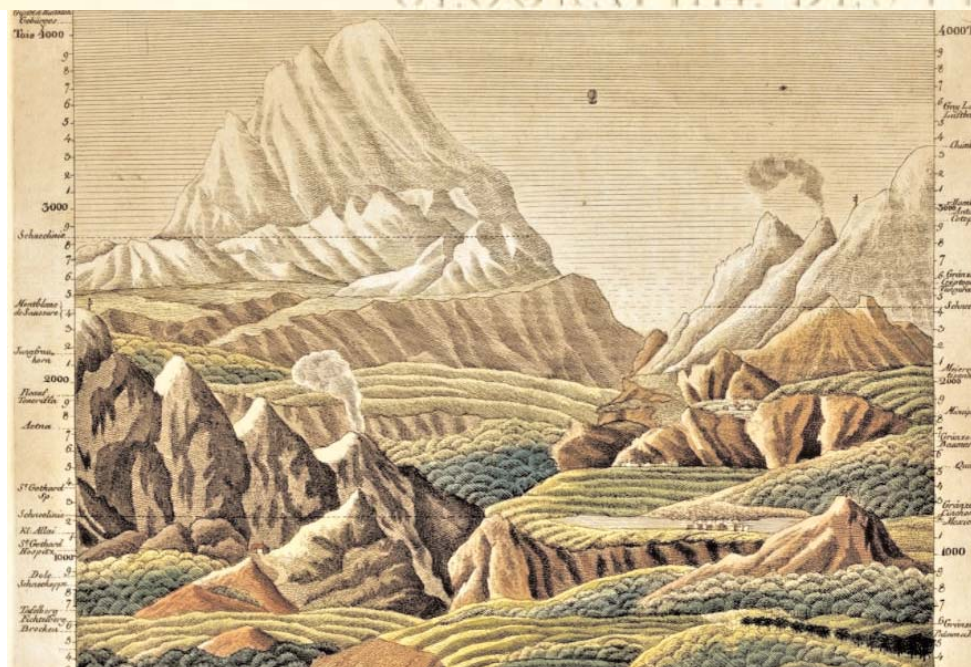
We are becoming autopoietic, driven by a perpetual movement of creation.

"It is no longer a terrestrial problem, or only terrestrial. We are dealing with processes of increasing complexity, of memorization, of integration, which we find absolutely everywhere, and at all times; at the origin of the life, throughout the evolution of life, but also before life. We can go back as far as we want: there are no atoms if we do not integrate quarks; there is no there are no molecules if there is not the diversity of atoms, and the integration of these atoms into more complex structures; there is no single-cell stage if there is not the diversity and integration of complex molecules, RNA, DNA, enzymes, etc. To put it briefly, the omnipresent process in the Universe, both inert and living, is the integration of diversities into a dynamic structure which has the genius to be able to engender the memory of its own construction. It's absolutely fabulous! Yet we ourselves come under this logic which consists in reintegrating an ancient memory. en. No doubt evolution also requires a diversity of memories. Two or more memories meet, fertilize and integrate, recognize each other in their diversity, and a new memory can then emerge.

This story is therefore not earthly. It is much deeper, and I believe that we must go all the way: it is directly linked to the initial conditions of existence, to the initial conditions of this process of integration of increasing complexity, and finally to what happened at the origins of the Universe." (Anne Dambricourt - Malassé , Researcher at the CNRS / Institute of Human Paleontology - Prehistory Laboratory of the National Museum of Natural History. www.leshommes-Associés.org)



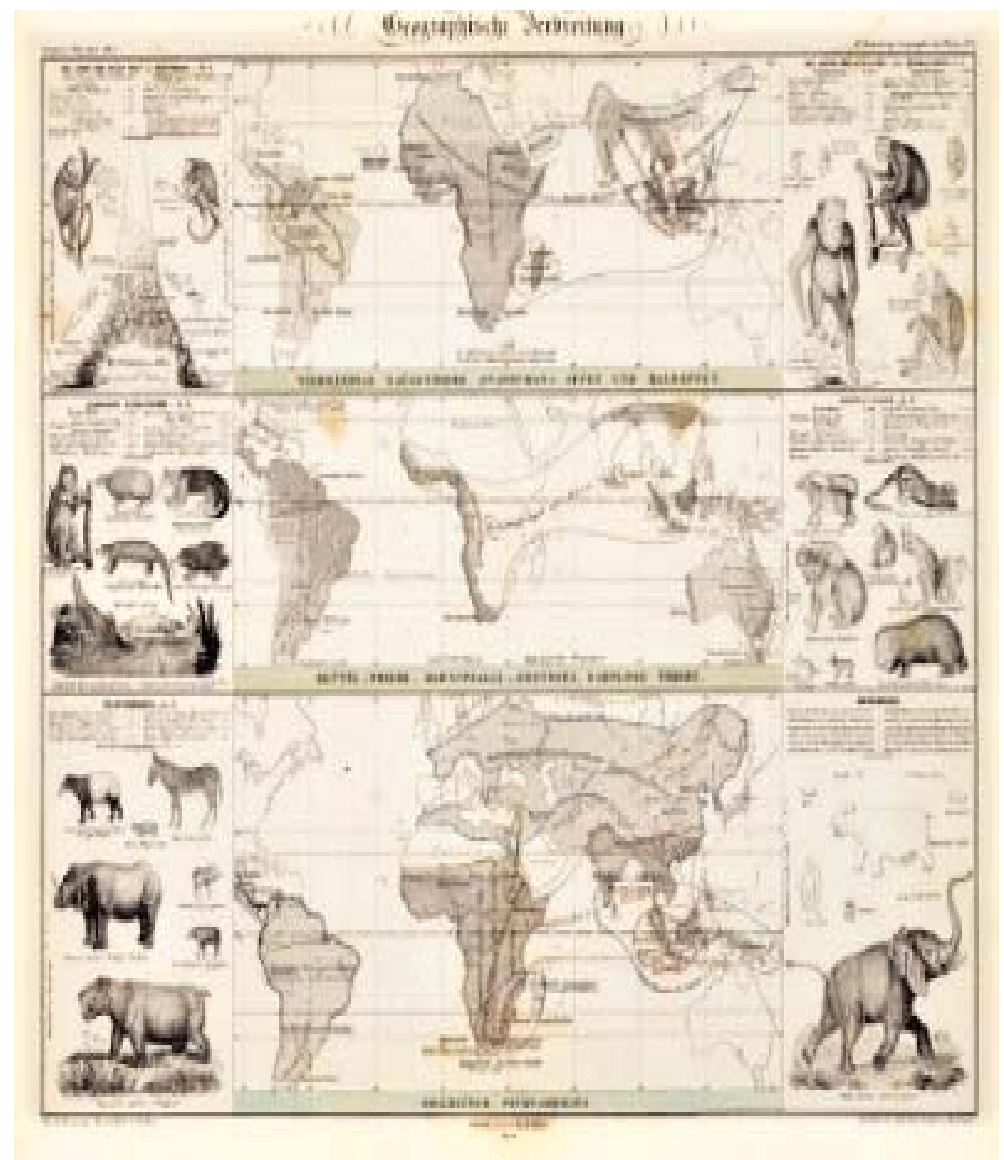
GÉOGRAPHIE DES PLANTES ÉQUINOXIALES.





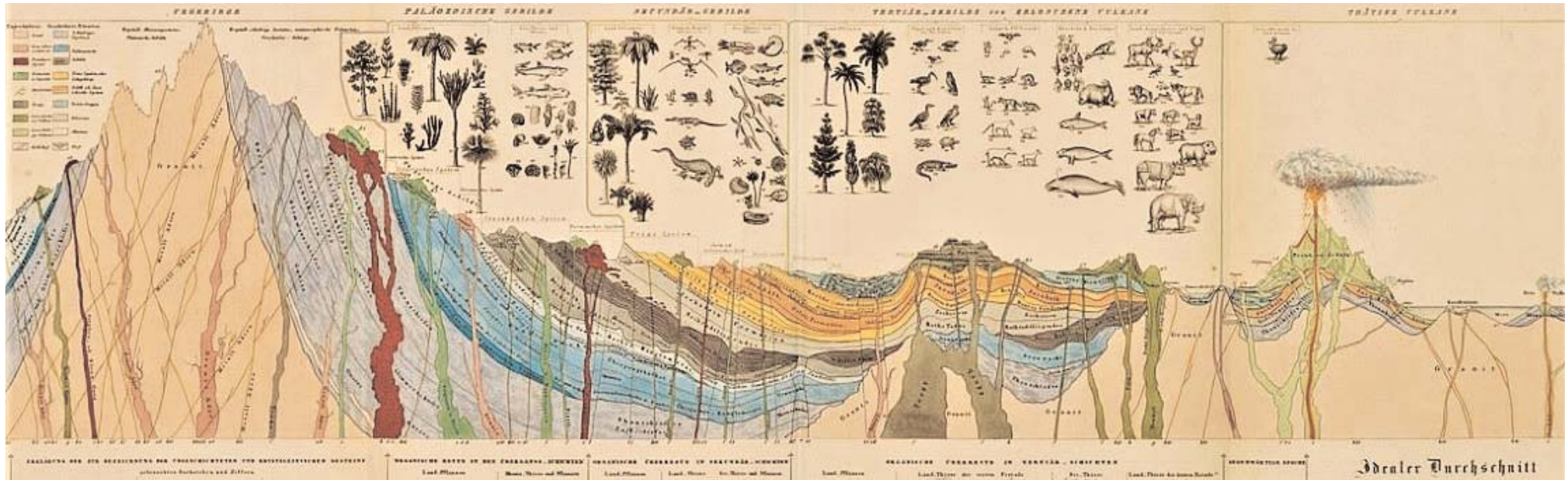
Glimpses of Plant Geography

This map is a simplified illustration of the geographical occurrence of plant species and is titled "Outlines of Plant Geography, containing: 1) the distribution of plants according to the main relationships. A. von Humboldt's statistics on the families of plants and the most distinguished groups of plants; the twenty five phytogeographical empires of J. Schouw; Range of the palm family, the spruce genus (Pinus) and the heather genus (Erica). - 2) Distribution of plants in the vertical direction in warm, temperate and cold zones, etc. - 3) Ratio curves of mono- to dicots in the Swiss Alps - 4) Graphical statistics of excellent plant families - 5)



Geographical distribution of animals

Este mapa del mundo intenta capturar y afectar geográficamente el mundo animal en un mapa y se titula "Tres mapas para un esquema de la distribución geográfica de: A. Mamíferos de cuatro manos, Quadrumana: monos y medio monos. B. Beeches, Marsupialia y animales desdentados, Edentata. C. Pachyderms, Pachydermata." [Kosmos I: II, i p. 178-188]



Ideal average of the formation of the earth's crust

This profile section is an idealized illustration of the plant and fossil deposits of past geological ages and is titled "Ideal Average of a Portion of the Earth's Crust. Written by Thomas Webster FGS etc. Plants and Animals According to Selection and Dr. Buckland's arrangement, drawn by Joseph Fischer." [Kosmos I: II, af p. 79-157]



Geographical distribution of human races

This historical map classifies human ethnicities according to their geographical distribution and is titled "Geographical Distribution of Human Races. Outline of Food and Population Density in Arable Countries, and Some Elements of Human Physique." [Kosmos I: II, i p. 178-188]



Thus this diversity of levels of consciousness common to all species down to the smallest particles therefore forms a Unity specific to the entire Universe. This "dynamic structure which has the genius to be able to engender the memory of its own construction" also finds its reason for being in Christian theology. It was indeed the father of the Church Anathase of Alexandria who, long before de Broglie's "points of memory", sixteen centuries earlier to be precise, developed the argument in favor of an intentional genetic code of the spirit, kind of *logoi spermatikoi* translated into French as "seminal reasons". Anathase completed the analysis of this force by attributing to it a dynamism (*dynamis spermatika*) responsible for the development factors of matter.

"These *logos spermatikoi* or "seminal reasons" are individuated and concrete participations of the great divine Logos, simple expressions and particular realizations of the thought and intentions of the Artisan of the Universe, which gathers all the beings of the Cosmos in a great divine design which obviously has its plan, its logic and its organic dynamism." (Bertrand Guy-Marie, *Cosmic Revelation in Western Thought*, Fides Editions, Montreal, 1993, p.218)

It will be up to the natural philosopher Von der Weltseele to conclude in these terms: "nature is the visible spirit, the spirit, the invisible nature", such is "the soul of the world".

All thought is contingent on a metaphysical premise including scientific logic. Everything is language, the atom, like the letters of the alphabet, is the language of the Universe (Leucippus), the Universe is musical language (Pythagoras and Kepler), the Universe is mathematical language (Copernicus, Galileo and Einstein). In fact all join the metaphysical aims of Anaxagoras (610-547 BC) who then proposed intelligence as the principle and organizing force of the Universe that quantum physics describes as "primordial information". Thus this diversity of levels of consciousness common to all species down to the smallest particles therefore forms a Unity specific to the entire Universe. We can take up this word from Plato:

"nature is an enigmatic poetics (*poïesis*)".

For not only is nature alive, but man also has the particular faculty, thanks to the *logos*, of transmuting the knowledge of life into a spiritual experience; what the Theosophist Joseph de Maistre called "the Revelation of Revelation."

Thus Einstein pleaded in favor of a "cosmic religiosity" to which corresponds "no idea of a God analogous to man"; a cosmic religiosity without dogma, without a Church, without a caste of priests. Certainly, because this religiosity is unavoidable; the more science apprehends the limits of the Universe, the more its representation escapes the rational and takes refuge in metaphor and poetry, which the famous physicist Werner Heisenberg illustrated in these terms: "We certainly end up succeeding in understanding the world, presenting its structures of order in mathematical forms; but when we want to talk about it, we have to content ourselves with metaphors and parables, almost as in religious language."

Should we then be surprised by the declaration of the physicist Niels Bohr according to which the Asian symbol of Yin-Yang played a primordial role in the formulation of his theorem on the law of wave-particle complementarity while his colleague Capra publishes his best- sold under the revealing title *The Tao of Physics* and Edwin Schrödinger, *A Physicist's Veda*.

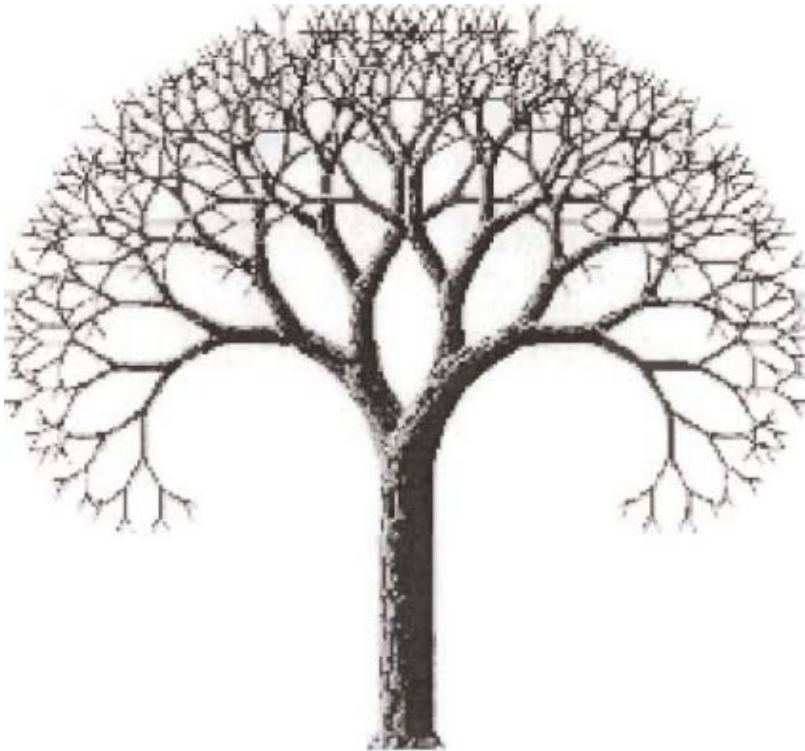
Now remains to decode and understand how uniqueness can be multiple at the same time? Morphological theories (science of forms) will come to our aid. With these we leave the quantum world of the infinitely small (one millionth of a millionth of a centimeter) and the world of relativity of the infinitely large (one million billion billion kilometers or 1 followed by 24 zeros, ie the dimension of the Universe observable today.) for back on the ground and tackle the world around us, our daily lives.



It can be said without fear that morphological theories can be considered as the philosophy of nature of modern times by shedding new light on the situation of man in the world, his relationship to things and to himself. We leave the galactic coldness of pure rationality to approach the world of sensitive qualities, the warmth of colors, the shimmering of shapes, the undulatory movements of matter, in short, the world where we live, where we smell the perfumes of life. and feel its poetry. From the world on our scale, you just have to open your eyes to perceive the richness of a complex and multiple nature where everything is intertwined.

The immense variety of the forms of nature comes from the modeling and the remodeling of a small number of fundamental forms of which the spiral, the meander, the ramifications and yet from these "fundamentals" hatches a whole panoply of subtle differences. The

The tree represents all possible outcomes that have different trajectories . Moreover, all possible data, nodes , exist simultaneously in the final proposition . They are independent and have a probability coefficient from the memories that we know, the branches cannot continue indefinitely, they are limited by the capacity of their innate memory.



variety of forms arises from strangely limited primary structures.

"But when you see how the branches of a tree resemble those of arteries or rivers, how the crystals resemble soap bubbles and the patches of a turtle's shell, how the spirals of fiddleheads and those of galaxies are like the whirlpools of a draining bathtub, one can't help but wonder why nature uses only a few related shapes in such different contexts? (Stevens Peter S., Shapes in Nature , Editions du Seuil, Paris, 1978, p.1)

True ! But are the Universe, nature, space and their seemingly elementary structures that simple? If there is limitation, does it not come from the observer? Because indeed, modern physics since the relativity of Einstein and the quantum mechanics of Planck with their coherent mathematical descriptions showed us the probability that there exists in the Universe other spaces where structures and forms are not there the same as ours. In order to better grasp the concept of a single universe and multiple spaces, let's take the example of the chrysalis that becomes a butterfly. This butterfly is not a new being (another universe) but the same being that has changed and revealed a disposition intrinsically understood in its genetic system. The multiple spaces are part of the provisions of the "genetic" system of the Universe. They are present there but just as invisible as the chrysalis in the butterfly can be for us. The butterfly (our reality) masks the chrysalis and vice versa, so that for the observer, the butterfly, even if it presents itself as a total reality, is however only one of the possible perspectives. In this "world of flesh", evolution continually brings about the emergence of new states of matter. The astonishing and abundant variety of forms describes, each in its own way, a nature with ramifications of rare complexity. Like the Quantum Universe, the forms are in perpetual expansion and, while lasting, change through a series of distinct states, it is a world populated by corpuscular and undulating matter capable of innovating and which weaves correspondences between them. incredible, a real " work in progress ".



Multiverse

According to the bubble-universe theory, our universe would only be the equivalent of a kind of gas bubble that appeared like many others. Our universe in this case would be a portion of a multiverse. A few moments after the Big Bang, the universe would have experienced a phase of exponential expansion, inflation. As a whole, the universe is a huge fractal of expanding bubbles. The universe, as a whole, has no beginning or end, and its size is infinite because bubbles are constantly being created. This is eternal inflation. The universe-bubbles is in perpetual creation.

According to this scenario, there would be a multitude of universes, one of which would be the one in which we live. And each of these worlds would be governed by different laws; what we thought were the fundamental principles of nature would no longer be so absolute. Thus, the types and properties of elementary particles and their interactions could vary from one universe to another.

The idea of the multiverse emerges from a theory suggesting that the primordial cosmos underwent a meteoric, exponential expansion. During this period of "cosmic inflation", some regions of space would have seen their rapid expansion come to an end sooner than others, forming what are called "bubble universes", much like bubbles in a volume of boiling water. Our universe would correspond to one of these bubbles, beyond which there would be an infinity of others.

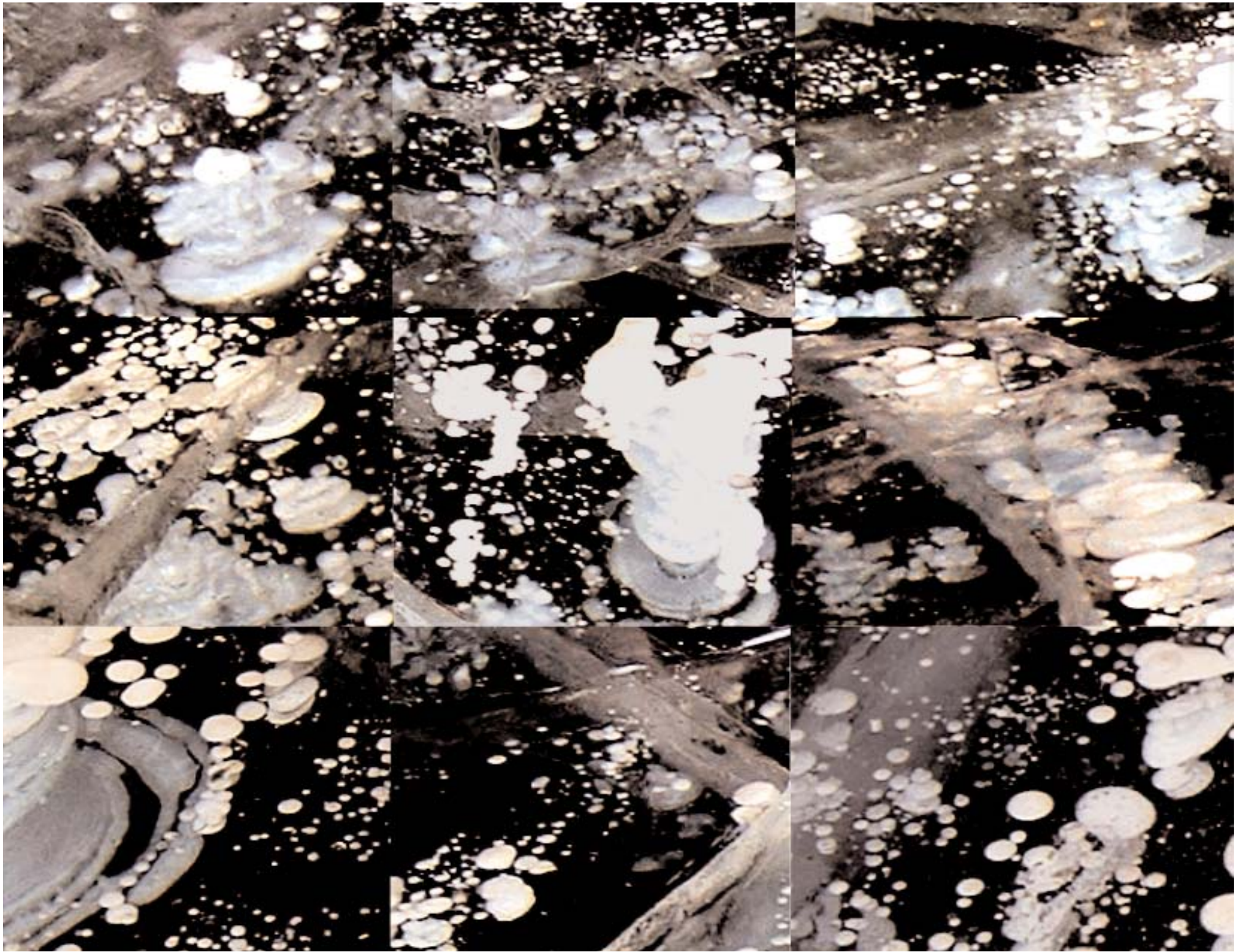
The idea that our universe is just a small part of a much larger structure isn't as bizarre as it sounds. After all, throughout history, scientists have repeatedly learned that the world is more than what is visible. However, the notion of the multiverse, with its unlimited number of bubble universes, presents a major theoretical problem: it seems to remove the ability of inflation theory to make predictions about the properties of our universe, a central requirement for that a theory is useful. In the words of one of the fathers of inflation theo-

ry, Alan Guth of MIT (Massachusetts Institute of Technology), "in an eternally inflating universe, anything that can happen happens; in fact, everything happens an infinite number of times".

Thus, the existential question within the multiverses would be: "how much am I?". Without counting that in the batch, would exist at least a Universe whose characteristics would coincide with the conditions of appearance of the Man, which would make null and void the question of a Universe cut for us.

In a single universe where events occur a limited number of times, researchers can calculate the relative probability of one event occurring over another by comparing the numbers of times those events occur. But in a multiverse where everything happens an infinite number of times, such a count is impossible and, therefore, nothing is more likely to happen than the rest. We can make the predictions we want, they are bound to come true in one or the other universe, but that does not tell us anything about what will happen in our own universe.

This lack of predictive power has long troubled physicists. Some researchers suggest that quantum theory (which describes the behavior of particles at the smallest scales) could, ironically, point the way to the solution. More precisely, the cosmological scenario of an eternally inflating universe would be mathematically equivalent to the "many worlds" interpretation of quantum physics.



The more the perception multiplies the perspectives, the better it grasps the "truth" of the object. This is exactly what we have tried to represent in the following pages where the same reality is presented from another perspective so different that our brain wonders if they both represent the same entity.

However, the evolution of forms obeys specific laws distinct from those which act on matter. Indeed, the figure of a form has neither magnitude, nor length, nor speed, nor volume, nor temperature, nor mass; in short, it cannot be quantified. The form of a thing is an elusive reality that one cannot hold, take, weigh; the form of a thing can only be perceived. It requires an intellectual disposition that favors contemplation and is similar to a more "spiritual" science.

So that: "in nature, the conditions are never quite simple, and any "elementary" or "isolated" object is part of a larger system, which in turn operates within other even larger systems.(...) The warning is clear: nature never conforms exactly to our simple patterns." (Stevens, op.cit ., p.44)

We would therefore be in the presence here also of a "logos" globally regulating and ordering the development of the forms of the organisms and of the different parts composing it. It is a global morphogenetic (Thom) field that governs the various particularities of each organism. Thus all the objects in our world each have a singular form obeying the "laws" specific to a global field governing all possible probabilities and, by this very fact, infinite.

Thus all the large groups of matter, from the infinitely small to the infinitely large, all the large families of living things, plants, animals, humans, all the groups of forms respond to an internal logic which forms an ordered Whole. Man no longer imposes his law on reality, descended from his pedestal, he is now part of nature whose diversity he knows. He is a living being who must "harmonize his individual action with the action of all other living beings so as to preserve the life of the other and ensure the perpetuation of the

whole living phenomenon."

"The Living forms a vast network throughout the Universe and that, at less generally, and as far as one perceives, everything holds together and helps each other in Nature, the Living being based on the Living being which rubs shoulders with it or which precedes it to feed itself and ensure the survival of its offspring : the plant feeds on the mineral, like the animal on the plant and the human on the animal." (Charon, Le Tout, l'esprit, la Matière, p. 107)

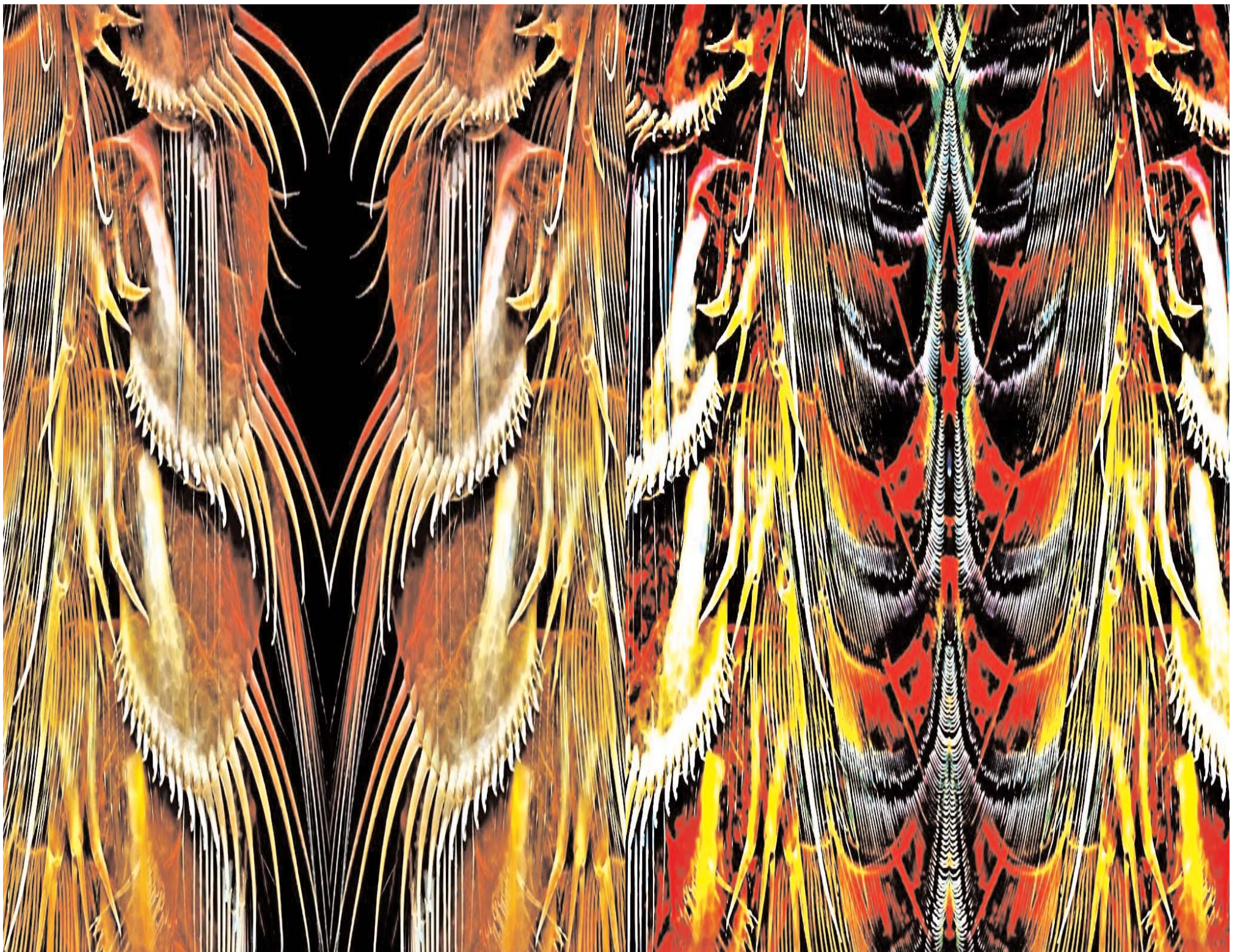
"Nature is not made for us, it is not left to our thinking"

(Prigogine- Stengers)

According to anthropic thought, the world exists only to satisfy the needs of man, even more than it was created for man. Well no !

Evolution follows its course inexorably and know that if the event

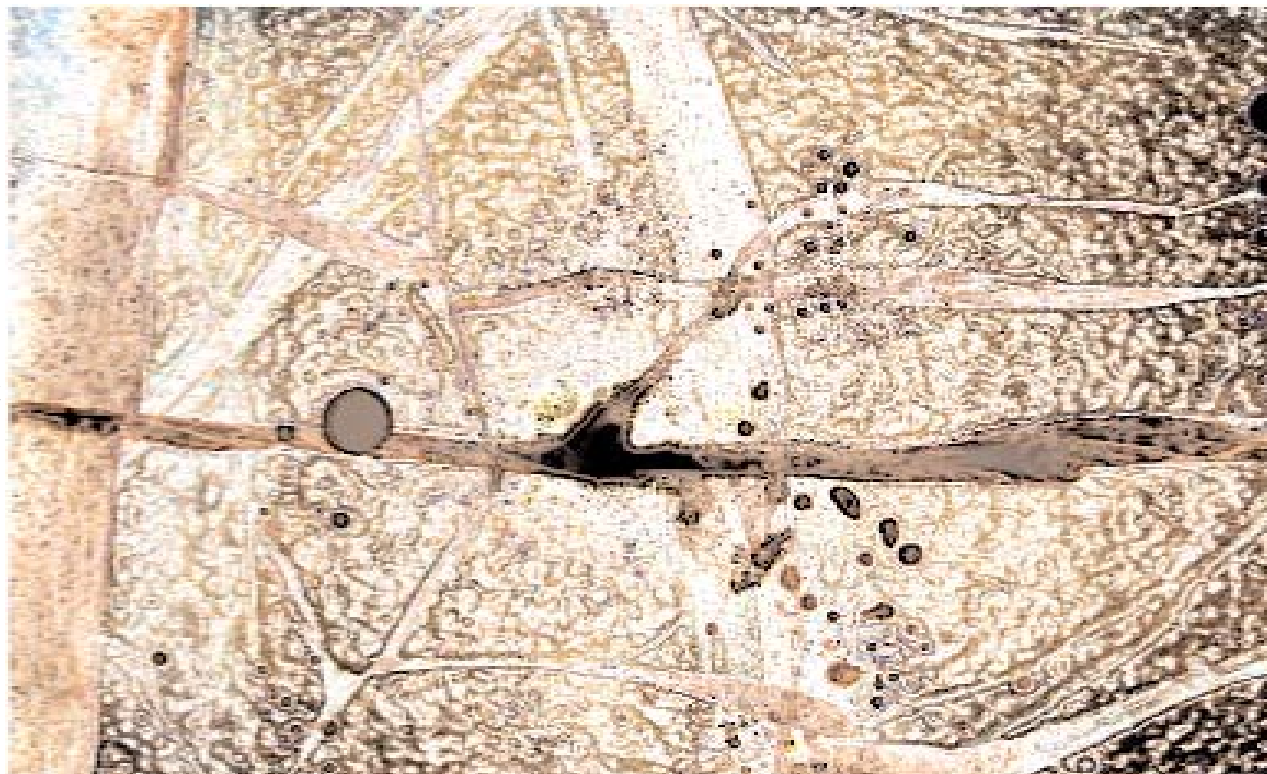




of a giant asteroid which fell on the earth 65 million years ago had not happened, well, it is a safe bet that humans would not exist and that the earth would always be under the reign of the dinosaurs so well they were adapted to the environment and their brain would perhaps have climbed the ladder of "memory points" necessary for consciousness. Nature is therefore not a system of rigid laws that can be manipulated at the whim of man, but rather a set of forms over which we have very little control. Life results from the general tendency of matter to organize systems creating order from disorder (Prigogine) whose movement is oriented from unity to diversity, thus developing ever more complex structures where, paradoxical thought obliges, one is also all. Like the hologram where the whole and the parts are one and the same, the One and the variety of forms express one and the same reality. One is multiple, the multiple leads the One to All and vice versa.

All liberation is chaotic.

Physical science is based on the assumption that the Universe has laws, and its whole ambition is to find them. From this point of view, there is therefore no disordered system: all systems all have an order, laws that describe them. On the other hand, it is quite obvious to everyone that there are "complicated" systems, endowed with too many factors for us to be able to take them all



into account and make precise prediction calculations. These systems appear disordered.

Chaos theory demonstrates the existence of particular combinations of order and disorder, measures this degree of irregularity through fractional geometry and represents, through the computer, the fractal image of chaos. All the sciences are concerned, to respond to Plato's intuition reformulated by James Gleick : "(...) behind the visible and particular forms of matter must hide ghostly forms which serve as their invisible model." So much so that the disorder of matter, of forms, of the world is only apparent disorder. It's not only after the fact, only after the storm, that we can see that the evolutionary development is perfectly coherent. Regulating the system brings us back to auto poiesis.

"There was light and order was freed from disorder".

This famous verse of Milton inspired by Genesis inevitably brings

us back to Prigogine's work on chaos. It was he who reversed the famous principle of thermodynamics that "the Universe is in perpetual struggle against the irresistible rise of disorder." On the contrary, he demonstrated that life is none other than the history of an increasingly higher and complex order underlying the apparent chaos of matter. The chaos being that a necessary and transitory instability towards the order thus confirming the

theorem of Zermelo is that any system comprises relations of choice which make it possible to order it well.

Since Prigogine's statements, we have witnessed a "re-enchantment" of the world, a "resacralisation" of nature marked by a new discourse which "rationally" reformulates the old cosmologies which have known how to preserve the links which unite the living to the Universe, earth to sky, man to cosmos.

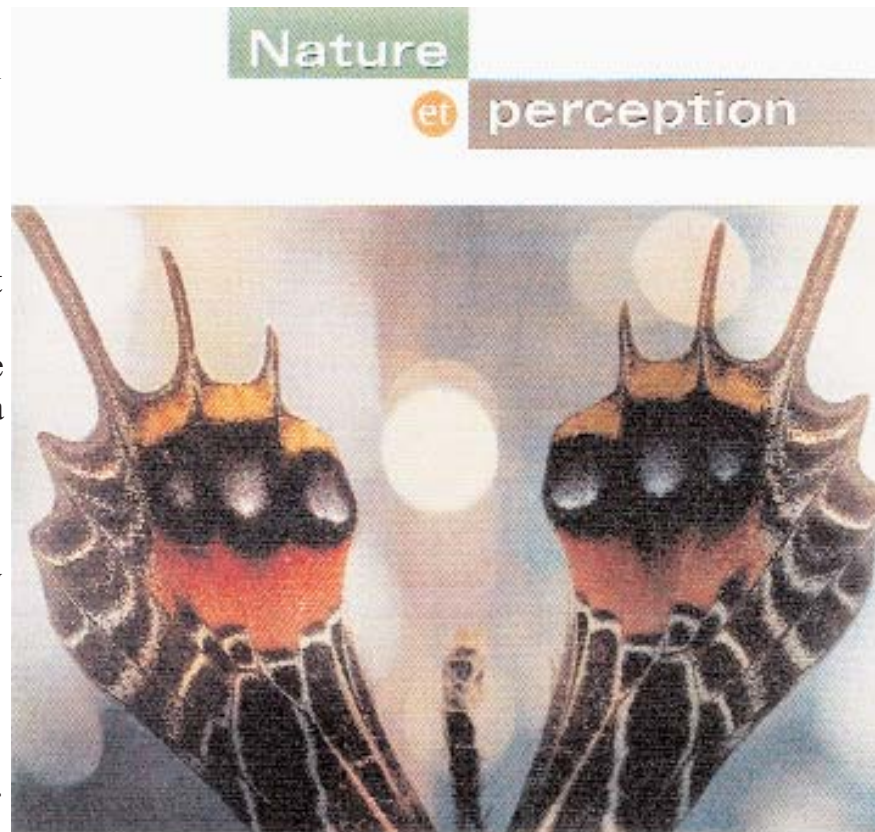
According to mainstream physics, there is an irreversible process in the cosmos called entropy which involves an ever-increasing process of disorder. The entropy defined by the degree of disorder increases irreversibly. Prigogine's work on chaos demonstrated that, on the contrary, the irreversibility of entropy is possible. Again we must appeal to paradoxical thinking, according to Prigogine "non-equilibrium is the source of order; chaos produces order."

Thus increasing disorder implies the creation of a new order. One could even think, theologically speaking, that Prigogine resolves the famous fight of the Sons of Light against the forces of Darkness, so dear to Zarathustra. Philosophically, one can even argue that the question of evil as disorder only arises in periods of chaos as the absence of good. We are thinking here of Seneca who writes in one of his Letters to Lucilius: "What is Good? The knowledge of reality. What is Evil, its ignorance". This misunderstanding of reality can lead the free being to turn this freedom against himself. But this is exactly the situation we are faced with. The reproduction capacity of Humanity as a socio-economic entity centered on inno-

vation-commodification-consumption has reached the limit threshold of available natural resources and thus jeopardizes the entire self-reproductive system of living beings developed on earth for millions of years. As such, we are destroying hundreds of square kilometers of forest every day, even though it took 3 billion years for plants to completely colonize the earth and set up this extraordinary evolutionary system on which we depend.

It's all just perception.

A subatomic particle is not a solid body like a grain of sand. Quantum mechanics considers the particle or "quantum" as a possibility, "a tendency to existence", a quantity of energy which seeks to manifest itself, in short, a potentiality. Classical physics assumes the existence of a world separate from us, an external world that we can quantify, weigh, measure. Quantum mechanics cancels this separation, integrates us into its universe to the point where it exists because we observe it and "it is not possible to observe reality without changing it".



Let's go back to the idea of light that is both corpuscular and wavelike. If we want to demonstrate the wave character of the phenomenon, we must choose the appropriate experimental device; in doing so we contaminate the objectivity of experience because we ourselves create the properties of an object because we decide to observe and measure them. We can only demonstrate one property at a time, either the undulation or the corpuscular, never both at the same time. We cannot predict quantum phenomena with certainty, we can only calculate their probabilities .

Thus the most "impenetrable" theorem of quantum physics is that of Bell who, let us recall, suggests that "the distinct parts of the Universe would be, at the deepest and most fundamental level, linked together in such a way as to both intimate and immediate." Inevitably the question arises: how can two particles separated by millions of light-years communicate so instantaneously? Such communication implies that information travels at a speed greater than light. However, most of physics postulates that "nothing in the Universe can move faster than light." As we see the implications of Bell's theorem open the door to several interpretations and of course divide many physicists among themselves. But the only inescapable conclusion is that: "if the statistical predictions of quantum theory are correct (and they are to this day), then our conventional ideas about the world suffer from profound deficiencies". From then on, the physicist Stapp put forward the theory of superluminal speed, itself confirmed by Sarfatti's postulate which he baptized "superluminal transfer of negentropy" generally called the "quantum leap". What happens here is intimately and immediately related to what happens elsewhere in the Universe and vice versa; there are no separate parts in the Universe. "We cannot extract ourselves from the image of the world." (Zukav Gary, *The Dance of the Elements*, Éditions Laffont, Paris, 1982, p.290-323).

We create at every moment the world in which we live and can therefore influence our reality, but we cannot objectively observe the world because we participate in it, which Hindu wisdom formulates in these terms *Tat tvam asi*, "That is you." But who is this? And the physicist Bohm responds: this is "what is", a "flawless totality", the supersymmetry of string theory. It is here that quantum physics makes a metaphysical, not to say theological, "leap".

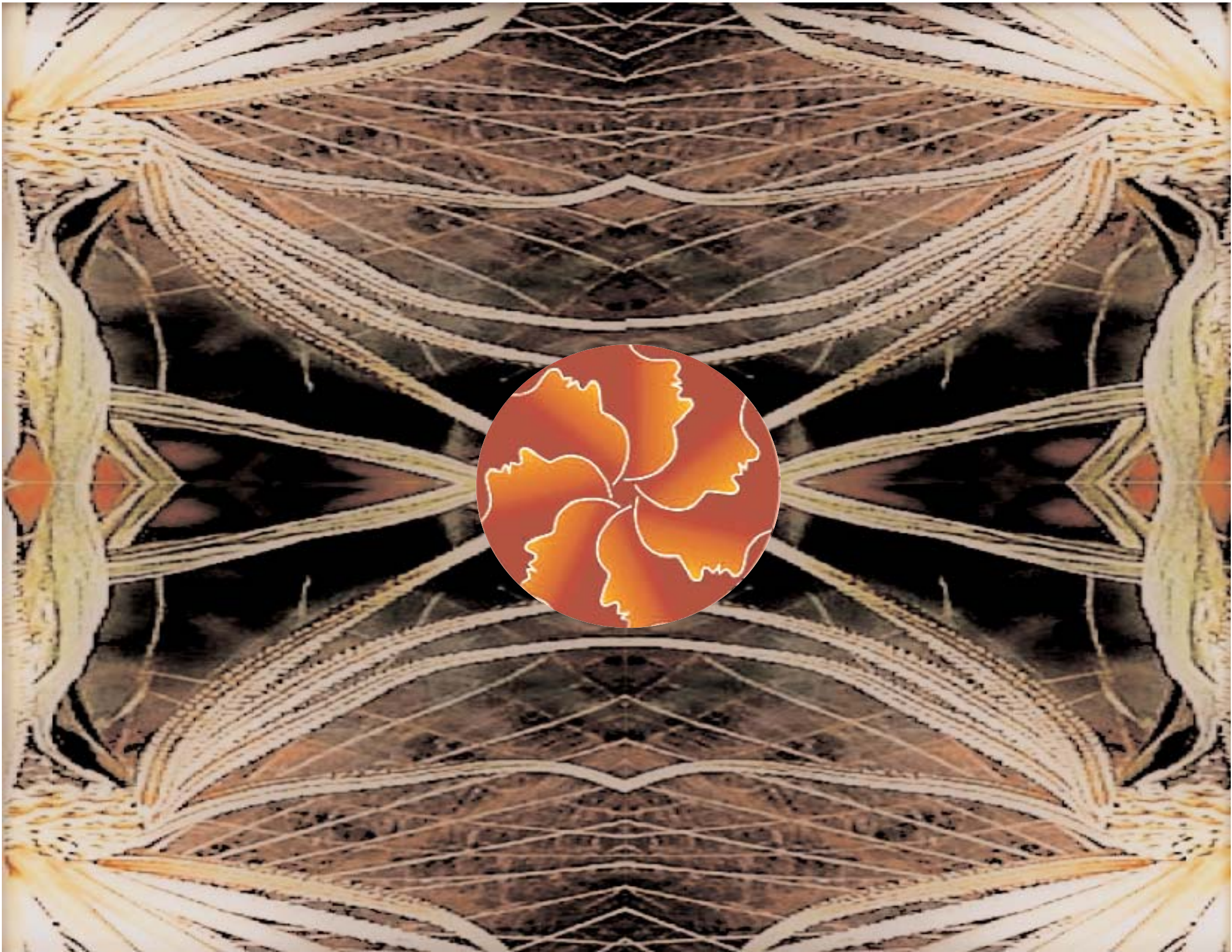
"The real is one, but the learned man calls it by different names." (Rig Veda, X; 129, 2).

In 1922, a great scientist and Jesuit priest tried to bring the Catholic Church closer to the natural sciences. His writings deemed too revo-

lutionary, the Vatican forbade him to teach and publish in 1926. This brilliant paleontologist chose exile in China - we owe him the discovery of Peking Man (*Sinanthropus*) - and then visited all the great excavation sites of the globe. Very quickly, his travel diaries are transformed into philosophical essays that he decides to "slip" during meetings with friends or conferences between colleagues. In 1946, the American intelligentsia, favorable to his avant-garde thoughts, offered him to settle in the United States.

Pierre Teilhard de Chardin can then more freely express the great spiritual metamorphosis awaiting humanity: the noosphere. The more matter, the atom, becomes more complex, the more it becomes conscious, he explains. Man, as the most sophisticated conscious organism, has allowed evolution to access the technosphere, the fruit of reason. This new leap succeeds the successive spheres that have covered the earth: the lithosphere, the biosphere, the atmosphere. By adding the technosphere, man brings evolution to the threshold of a new leap where the men of the future will no longer form, in some way, a single consciousness, the noosphere he announced in 1924, taking over the idea put forward several centuries earlier by Anaxagoras has since been revised and corrected. In *The Human Phenomenon*, he conceives of humanity as a stage of evolution leading to the unfolding of the noosphere.

De Chardin was probably the first theologian to relate quantum logic and spirituality. "The Absolute is not only in the perception of truths and principles: it is above all in the vital current that we feel within us", "nothing is profane here below. Who knows how to see", everything is being, there is only being everywhere, outside the fragmentation of creatures, and the opposition of their atoms." (Teilhard de Chardin quoted in *Pantheism, Action, Omega*, Éditions Desclée de Brouwer, Paris, 1967, p.27).



He is convinced that the spiritual movement of our time is characterized by the "appearance" in the consciousness of a new Universe where God is "as vast and mysterious as the Cosmos; as immediate and enveloping as Life; as linked to our effort than humanity. Man must enlarge his heart to the measure of the Universe." (Pantheism, Action, Omega, op. cit ., p.19)

The Omega point is conceived as the convergence pole of evolution and will manifest itself by the advent of an era of harmonization of consciousnesses based on the principle that "the Universe is psychically convergent": each center, or individual consciousness, is led to enter into ever closer collaboration with the consciousnesses with which it communicates, these eventually becoming a noospheric whole.

The term "omega point" was taken up by the American physicist Frank Tipler, apparently without referring to the name of Teilhard de Chardin and his work; as if there had been a convergence of the concept between science and spirituality. Evolution takes place, according to de Chardin, in the possibility of consciousnesses communicating with each other and creating de facto a kind of super-being: by grouping together through communication, consciousnesses will make the same qualitative leap as the molecules which, in assembling, had suddenly passed from the inert to the living. This "supraluminal" communication between beings takes up exactly the concept emitted by Bell's theorem. Except that instead of communication, de Chardin prefers to use the term "communion". Teilhard therefore predicts a growing unification of the intellectual (even "spiritual") activities of the planet, just as human activities have become unified within the frameworks of societies and civilizations, or that of cells within organisms. Not for some mystical reason, but much more simply because efficiency gains lead to it as surely as, say, questions of potential "force" a chemical reaction to occur like the deuterium atoms that have merged during the big bang when the temperature lent itself to it. Finally, the physical evolution that led to hominization is coupled, according to him, with a spiritual evolution

that he calls humanization. Wondering where this increased consciousness comes from, he also attributes it to the growth of the complexity of nervous structures in accordance with the theory of "memory points", put forward by the physicist de Broglie: the brain of mammals is more complex than that of reptiles, that of humans more complex than that of mice.

God is the eternal present of the movement, without this pure act, everything falls back into nothingness. It is not a static, frozen Absolute but on the contrary dynamic, in the making.

The man "in the image of God" now takes on a quantum meaning, merging the observer with the "participant." (Wheeler) When man observes nature it is nature that observes itself. When man destroys nature, he destroys himself.

"The Universe is a machine for making gods". (Bergson)

Classical physics from Galileo to Newton had accustomed us to consider reality placed under the sign of confidence in immutable laws. This period corresponds to that of man conquering new territories thanks to the discoveries of new continents, new civilizations. Nature suffered the same fate, its "hostility" had to be overcome, its order fragmented, dissected. The art scene was a field of experimentation where all the research and all the claims were expressed: deconstruction of forms by cubism, disfiguration by expressionism, subversion of images by dadaism. In this sense, cubism, by fragmenting the bodies, dismantling them into so many detachable parts, restores the concept of the body-machine of Descartes, while the neoplasticism of Mondrian marked the apogee of the geometric vision of the world since Pythagoras and Galileo during that Italian Futurism will linger to praise the movement and speed of the mechanized object. A new concept appears, describing painting no longer as a process of representation but as a method of knowledge.

"The visible world only becomes the real world through the operation of thought" (Gleizes, Metzinger)

Human history is shot through with such fundamental discovery that it often closes eras. Thus the scientific discovery of Copernicus (1543) which revolutionized the astronomical system by placing the sun at the center of the Universe marked "the end of the Middle Ages and the beginning of modern times, because, much more than the conquest of Constantinople by the Turks or the discovery of America by Christopher Columbus, it symbolizes the end of one world and the beginning of another." (Koyré). In *Structures of Scientific Revolutions*, the historian of science Thomas Khun recounts that in addition to the normal process of accumulating knowledge and discoveries, all civilizations were, at some point, propelled into a new dimension of reality that challenged question the foundations, the cognitive frameworks and even the ideological context which until then made it possible to make the world and society intelligible. These moments of transformation which Karl Jaspers call "axial epochs" are characterized according to Khun by paradigm shifts which constitute the intellectual framework of a new field of knowledge. Another important characteristic is that the paradigm shift is taking place, rather revolutionizing all sectors of human activity, be it science, art, politics or religion.

Theologically and scientifically, we find ourselves before the same cul-de-sac. The complexity of reality or of God leads us through an

inextricable network of interrelations whose incredible number results in such a tangle that it is impossible to understand their meaning with our current knowledge. Only poetry can make the mystery of the living tangible and make us love life until death, which alone will deliver us from our exquisite illusions. Without poetry, humanity dies of boredom.

Since nature is for us nothing more than a disordered poem, it falls to the scientist to bring together the scattered fragments; it is up to



the philosopher to explain them and to the poet to reconstitute their primary unity. This feeling of metaphysics is called spirituality and this feeling of spirituality is expressed through poetry. Because the man is above all a poet. He likes to invent worlds made up of fantasies, dreams, utopias, worlds inhabited by strange, passionate, often monstrous characters, interchangeable universes in tune with the latest scientific and other knowledge. Because all these languages have in common the poetic intuition of our essence and our future. Our ignorance of the poetic depth of existence coupled with our fragmentary mentality obscures the fact that there is poetry latent in every expression of language. Thus the ancestral philosophy of

Abya Yala must once again become the path towards the creative evolution of the future.

